PROSPECTIVE PAYMENT
ASSESSMENT COMMISSION

MEDICARE AND THE AMERICAN HEALTH CARE SYSTEM

REPORT TO THE CONGRESS

JUNE 1996

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June 1, 1996

The Honorable Albert Gore, Jr.
President of the Senate
United States Senate
Washington, D.C. 20510

Dear Mr. President:

I am hereby transmitting to the Congress the report *Medicare and the American Health Care System.* This report has been prepared by the Prospective Payment Assessment Commission as required by Section 1886(e)(2)(C) of the Social Security Act.

Sincerely,

Joseph P. Newhouse, Ph.D.
Chairman

Enclosure

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June 1, 1996

The Honorable Newt Gingrich
Speaker of the House
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

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Sincerely,

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Executive Summary

Executive Summary

America's health care system has been characterized by spiraling expenditures for the past three decades. With health care consuming an ever-greater share of the nation's resources, efforts to stem this relentless growth have intensified. Medicare—the largest payer for health services—has concentrated on constraining its provider payment rates. More recently, private purchasers have actively pursued strategies to control their health care outlays, often by adopting managed care techniques. Owing to these efforts, the growth in national health care expenditures has begun to slow. The duration of the slower growth trend and the appropriate level of annual increases in health care costs remain open questions.

What is known, however, is that managed care is changing the traditional health care financing and delivery environment. Through managed care methods, insurers are forcing providers to assume a part of the risk of providing health care services. Providers increasingly are bearing some of the financial consequences of their treatment decisions about the quantity and kinds of services delivered. This, in turn, is altering the relationships among providers, as they try to improve their financial performance and position themselves in the market. Insurers also are becoming more involved in the types and level of services delivered, changing the traditional roles played by payers and providers. These trends are affecting the way services are furnished and the ultimate costs of health care.

Perhaps the clearest example of the effect of stronger financial pressure is in the hospital industry. Faced with greater competition for patients and insurers' demands for lower rates, these institutions have responded by reining in their costs. After years of rapid increases, in 1994 hospital expenditures per case rose less than economywide inflation.

The impact of payer pressure, along with other changes in the health care environment, also is evident in the mix of services people receive. Providers that traditionally have cared for patients after an acute condition are expanding their markets by offering a broader range of services to more people. These post-acute care providers are now competing with hospitals and with each other for patients and garnering a larger share of the health care dollar.

In this report, the Prospective Payment Assessment Commission (ProPAC) examines recent trends in health care expenditures, as well as changes in financing and delivery and how they are affecting health care providers. Chapter 1 presents national health care expenditures and compares the experience of private payers and the Medicare program in controlling spending growth. It then discusses the use of private sector spending trends as a benchmark for future Medicare spending. Chapter 2 continues with information on health care financing and the ways that managed care techniques have changed the relationships between insurers and providers and among providers themselves. A summary of how these changes might affect access to and quality of care concludes the chapter.

Chapter 3 focuses on hospitals, which account for the largest share of health care spending, detailing their costs, revenues, and resulting margins. Special consideration is given to the relationship between declining hospital cost growth and cost shifting between the Medicare program and private payers. In Chapter 4, ProPAC presents an analysis of the relationship between acute inpatient hospital admissions and use of post-acute care. The distributions of patients and treatment patterns across post-acute care providers are also described.

HEALTH CARE SPENDING TRENDS

National health care expenditures climbed to $949 billion in 1994, having increased at more than twice the economywide rate of inflation since 1975. The rise in population explains some of the growth beyond inflation, but the expansion of health spending is evident even after controlling for both of these factors. Real per capita expenditures for health services grew at an annual rate of more than 4 percent between 1975 and 1994. Over that period, the share of the nation's economic output

devoted to health care rose from 8 percent to 14 percent. Recently, however, the increase in health care spending has slowed.

The shares of health spending across types of providers reflect major changes in the health care delivery and financing system. Hospitals continued to account for the largest portion of total expenditures, 36 percent in 1994, but this share has declined from 40 percent in 1975. Moreover, the mix of services hospitals provide also differs from the past. The share of total health care spending for inpatient services fell from 28 percent in 1975 to 22 percent in 1994, while the outpatient share rose from 4 percent to 9 percent.

The configuration of services outside of the hospital also has changed. Physician spending grew from 18 percent of the total in 1975 to 21 percent in 1990 before dropping to 20 percent in 1994. Nursing facility services accounted for a relatively constant share of total health care expenditures between 1975 and 1994. Home health care, by contrast, went from well under 1 percent to almost 3 percent during the same period. The increase in ambulatory and post-acute care is attributable in part to more emphasis on alternatives to the inpatient setting, but it also reflects the proliferation of providers and the availability and use of additional services.

The flow of funds from payers to health care providers also differs from the recent past. Medicare spending grew from 16 percent of the total in 1990 to 18 percent in 1994. Medicaid's share rose from 11 percent to 14 percent over the same period. Private health insurance, meanwhile, accounted for 33 percent of total health care expenditures in both 1990 and 1994, up from 24 percent in 1975. Out-of-pocket spending has declined steadily as a share of the total, from 29 percent in 1975 to 21 percent in 1990 to 18 percent in 1994. These trends have called attention to differences between private and public spending growth and raised questions about the reasons for them.

MEDICARE AND PRIVATE SECTOR SPENDING

Over the past two decades, expenditures by private health insurers and Medicare have fluctuated widely, but have followed similar patterns. In 1994, private insurers experienced slower growth in real per capita spending than Medicare, but before then, it was Medicare that generally experienced the smaller increases. In fact, from 1975 until 1992, Medicare spending growth was below that of the private sector in every year except for the four years preceding the implementation of Medicare's prospective payment system (PPS) for hospitals.

The recent deceleration in spending by private health insurers is widely believed to be a result of greater reliance on managed care techniques. Managed care plans employ various mechanisms to constrain their costs. Among these are initiatives to improve enrollee health status, utilization review, coordination of care, and payment arrangements with providers to control the volume of services delivered, the price per unit of service, or both. Medicare, which is predominately a fee-for-service payer, has successfully constrained the unit price of hospital, physician, and some other services. It has not, however, been able to control the volume of services. Moreover, although enrollment in Medicare's managed care options has increased sharply, the program has not realized the potential savings because of design flaws. These considerations have led the Congress and the President to develop proposals for improving Medicare's managed care program and expanding the range of managed care choices available to beneficiaries. Further, policy makers are looking to the private sector to identify other ways to control Medicare spending.

Medicare was enacted to remove financial barriers to health care for elderly Americans. Supplementary Medical Insurance (Part B), which covers physician services and other ambulatory care, resembles private health insurance in that it is funded partly by enrollee premiums. However, Hospital Insurance (Part A), which covers hospital, nursing facility, and home health care and accounts for the bulk of Medicare spending, is financed primarily through a payroll tax paid by workers and their employers. In addition to its financing, Medicare differs from private insurance in other important ways, including the population it enrolls, the services it covers, and the way it pays for them. Moreover, although the program was intended to operate within the private health care system rather than alter it, the level of Medicare's spending and its

payment policies have significantly affected other payers and providers.

Interdependence Among Payers

The developments of the past decade have illustrated the interdependence of Medicare's and other payers' payment policies. Through the early 1980s, Medicare and Medicaid reimbursed hospitals for their reasonable costs in treating their patients. Private payers paid somewhat more than costs, thereby offsetting losses from charity care and bad debt. With the introduction of PPS for Medicare and the modification of Federal restrictions on states' Medicaid payment methods, hospitals' ability to cover costs with payments from the two major public programs became more uncertain. In the early years of PPS, however, Medicare payments increased faster than costs, and the ratio of Medicaid payments to costs dropped only slightly during this period. In the late 1980s, neither Medicare nor Medicaid payments kept up with rapidly rising costs. Hospitals, facing pressure to generate additional revenue or reduce cost growth, found they could obtain higher payments from private payers, a practice known as cost shifting.

From 1986 to 1992, private payments went from 116 percent of costs to 131 percent. Since 1992, the pattern of cost shifting has changed, as private payers have resisted further payment increases. Unable to generate additional payments from private payers, and facing continued pressure from Medicare and Medicaid, hospitals have controlled their costs. By 1994, private payments were down from 131 percent to 124 percent of costs; Medicare payments had risen from 89 percent in 1992 to 97 percent of costs. Although in the aggregate Medicare payments relative to costs are still lower than private payments, the impetus for hospitals' recent cost constraint clearly has come from the private sector.

Comparisons of Medicare and Private Sector Spending

In comparing the trends in private sector and Medicare expenditures, a number of important factors must be considered. One is that Medicare enrollment is growing much faster than the privately insured population. Another is that since the populations and covered services differ, spending trends are also likely to vary. In addition, because Medicare's payments are so much lower relative to its costs, it is harder for Medicare to achieve additional savings through payment discounts.

Given the dramatic and ongoing changes associated with the rapid rise in managed care penetration, the trend in private health spending may not yet be a stable reference point. Wide fluctuations in the private sector trend may occur until an equilibrium is reached. Also, the data necessary to make some of these adjustments are not readily available, because trends in coverage, utilization, costs, and payments are not as well-documented in the private sector as they are in the Medicare program. This problem may worsen as the private sector and Medicare move toward managed care, since plans generally do not collect the patient-specific information that may be required for this purpose.

Nonetheless, the notable shifts in the flow of spending indicate how quickly the health care system is evolving, and suggest the need to develop benchmarks that can be used to evaluate potential policy changes. Private sector spending or some other measure—such as health-care-specific or general inflation or the trend in the gross domestic product—could be used as a standard. Regardless of the choice, however, the changing health care system and concern about the program's continued viability underscore the need to reassess Medicare's spending and how it should grow in the future.

CHANGES IN HEALTH CARE FINANCING AND DELIVERY

The recent changes in health care expenditure trends are due partly to pressure exerted by private payers. Employers that purchase coverage for employees and their dependents increasingly are demanding health insurance products that control their outlays yet preserve quality. This pressure has resulted in a shift toward managed care plans, which often have benefit packages that are similar to or more generous than traditional indemnity insurance, but at lower prices. Like indemnity offerings, managed care plans receive a premium for assuming the financial risk of providing a defined set of benefits for each person. Unlike traditional indemnity insurers, though, these plans attempt to constrain expenditures by playing an active role in the delivery of services.

Managed care plans contract with or employ selected providers, retaining those that have demonstrated low-cost practice patterns. Plans can offer providers a defined patient base in return for lower payment rates. Through selective contracting, they can play a major role in determining providers' patient volume. A plan's bargaining power, particularly with hospitals, is greatest in areas with excess provider capacity.

Managed care plans try to mitigate the risk that premiums will not cover the costs of the services in the benefit package. A per person or capitation system is the most direct way to achieve this. Under capitation, the provider receives a prepaid sum to cover a defined set of benefits for an enrollee and bears a portion of costs above the capitation rate. Most often used to pay primary care physicians, capitation creates a financial incentive for the physician to limit the volume and intensity of service use, which might be achieved through emphasis on disease prevention or controlling referrals to specialists.

Faced with heightened financial risk in caring for plan members and the greater need to compete for managed care contracts and enrollees, hospitals and physicians have begun to collaborate in new ways. Hospitals are striving to maintain their financial position by controlling their costs, seeking alternative revenue streams, or increasing their market share. Arrangements with other providers have the potential to accomplish all three goals, often because they help the hospital secure contracts with managed care plans.

Some physicians are responding to increased risk and the constrained financing environment by selling their practices to hospitals or managed care plans and becoming employees of those entities. Some are aligning with other physicians or other types of providers. Hospitals may be desirable partners because they generally are in a better position financially to furnish capital, technology, staff, and administrative support. In addition, physicians' market power may be enhanced if they associate with a hospital that has a strong presence in the market.

Major purchasers of health insurance products, primarily large employers, have accelerated the move toward managed care by demanding that health care spending be curbed. Over the course of the last decade, their actions have resulted in a shift in the flow of dollars away from traditional indemnity insurance toward managed care plans. The mix of plans offered by employers has changed rapidly during the 1990s, as they have searched for lower insurance premiums. Employees increasingly have been able to choose among health plans, which often include one or more managed care alternatives. Responding to this demand, insurers have developed more products, which has allowed employers to offer an even broader array of choices.

Medicare Managed Care

In contrast to the non-Medicare population, the vast majority of Medicare's beneficiaries are in its fee-for-service program. This is due to several factors. Fewer managed care plans are available for Medicare beneficiaries than for employed groups. In many areas, Medicare beneficiaries have no managed care options. Additionally, because of their higher risk of illness or established relationships with physicians or other providers, they may be reluctant to join these plans. A major reason that Medicare beneficiaries are not joining managed care plans at the same rate as the rest of the population, however, is that they can choose not to. Often, workers are offered no indemnity alternatives or there are financial incentives that favor the choice of managed care plans.

In 1995, the 10 percent of Medicare beneficiaries enrolled in managed care plans were concentrated in large urban areas. This was due, in part, to the location of the health maintenance organizations (HMOs) that participated in the Medicare program. Some areas had a significant Medicare HMO presence, while others—predominantly rural ones—had close to none. Further, about half the annual growth in enrollment between 1992 and 1995 occurred in the urban areas that already had high managed care participation rates.

Plans that participated in the Medicare program were more likely to be located in areas with higher payment rates. After accounting for local price differences, 68 percent of the urban counties with the highest Medicare payment rates had at least one participating plan. This compared with 44 percent of the

urban counties that had the lowest rates. The number of Medicare beneficiaries living in the county also was related to plan participation. Plans were much more likely to enroll Medicare beneficiaries in areas where there were large Medicare populations.

Medicare allows its beneficiaries to disenroll from a managed care plan on a monthly basis. Thus, those who may otherwise be reluctant to enroll have the option to try managed care plans for a limited time. Even with the liberal disenrollment policy, however, only about 6 percent of beneficiaries who enrolled in a Medicare managed care plan in 1994 for the first time disenrolled within 90 days. These early disenrollees were more likely to return to fee-for-service Medicare than beneficiaries who left later. The longer they were enrolled, the more likely it was that beneficiaries stayed in the Medicare managed care program. As of January 1995, half of Medicare risk contract enrollees had been in their plan for more than two years.

Medicaid Managed Care

Like employers and Medicare, the Medicaid program has experienced tremendous growth in health care spending, prompting states to turn to managed care as a cost-containment tool. Federal statute requires states to allow Medicaid recipients the freedom to choose their own providers. Because enrollment in managed care plans restricts this freedom, states must obtain a waiver from the Federal government to implement a managed care program. Most states have waivers so that they can require at least a portion of their Medicaid population to enroll in managed care.

Medicaid managed care enrollment has increased faster than managed care enrollment for any other insured population group. This growth has occurred primarily among women and children rather than the elderly and disabled, who are more likely to incur large expenditures. Medicaid spending for elderly and disabled persons, however, was 59 percent of total program outlays in 1994. Thus, Medicaid managed care growth is not affecting the largest share of program costs.

Effects on Access and Quality

The traditional method of financing health care in the United States has fueled the rise in health expenditures. Higher spending, in turn, has contributed to the growth in the uninsured, as more employers determined they could not afford to offer health insurance to their workers. But the tremendous growth in spending has had positive effects as well. It has purchased freedom of choice for patients, substantial control over pricing and treatment decisions for providers, and immediate access to expensive technologies for most of the population. At the same time, it has helped to finance the costs of providing services to the uninsured.

As payers continue their attempts to slow the growth in health care spending, though, access and quality may be affected. Spending constraints could hinder the development and diffusion of cost-increasing new products or techniques. Alternatively, they could spur more cost-reducing innovations. As providers grapple with more and stronger financial incentives to limit the number and intensity of services, they may have difficulty generating the surplus revenue needed to fund uncompensated care.

In fact, ProPAC found that hospitals facing an increase in financial pressure from private payers reduced their uncompensated care burdens between 1992 and 1994. The greater the rise in this pressure, the larger the decrease in uncompensated care. This relationship was particularly strong among hospitals with a high share of privately insured patients, which tend to bear a smaller than average uncompensated care burden. As these payment trends continue, therefore, nonpaying patients increasingly may be concentrated in a small number of safety net hospitals.

HOSPITAL PAYMENTS AND COSTS

Even as its role changes, the hospital continues to be a central element of the health care system. Although the proportion of total health care spending accounted for by hospitals is down considerably from a decade ago, they still represent the largest share. Since Medicare is the biggest payer for hospital care, its policies significantly affect the financial status of hospitals and the pressures they face.

PPS Margins

In fiscal year 1996, almost $80 billion in operating and capital payments will be made through

Medicare's PPS for inpatient hospital services. One of the essential features of PPS is its incentives for improved hospital efficiency and cost containment. In the first year of PPS (1984), hospitals held their cost growth well below the historical trend, but Medicare payments per case rose sharply. The result was an aggregate PPS inpatient margin of 13.3 percent.

In the following six years, cost growth resumed its rapid pace, while Medicare payments were constrained; by the seventh year (1990), costs were above payments, resulting in a negative PPS margin. In the eighth and ninth years, Medicare costs continued to exceed payments and pressure from private payers intensified. Costs began to grow more slowly, and the PPS margin began to level off and then increase. In the tenth year (1993), Medicare operating costs per case went up by 1.3 percent—the smallest rise in the program's history. As a result, the PPS margin became positive again for the first time in four years.

The eleventh year of prospective payment (1994) saw a 1.3 percent decline in Medicare operating costs per case. This was about 4 percentage points below the increase in the PPS market basket index, which measures the increase in the prices that hospitals pay for the goods and services they use. Although the growth in PPS payments per case was as low as it had ever been, the PPS margin rose by 4.5 percentage points, to its highest level in seven years. ProPAC estimates that, if current payment and cost trends hold, the PPS inpatient margin will have reached 8.8 percent by the thirteenth year (1996). This would be the highest PPS margin in more than a decade.

PPS margins in the eleventh year of prospective payment varied greatly across hospital groups and for individual hospitals within those groups. Urban hospitals had higher margins than rural hospitals, and the difference was widening due to lower cost growth for the urban group. Major teaching hospitals had much higher margins than other teaching and non-teaching facilities, a gap that has been growing. After several years of declining PPS margins due to rapidly rising costs per case, proprietary hospitals tightened their control of costs and their PPS margin increased sharply. In almost every group, however, some hospitals had extremely high or low PPS margins. Moreover, the disparity between those that were doing well under PPS and those that were not had grown.

Total Margins

In contrast to the PPS margin, the overall financial status of hospitals has been fairly stable. In fact, the aggregate total margin was higher in the eleventh year of PPS (1994) than at any time in almost a decade. Furthermore, the gap between the hospitals with the highest and lowest total margins had narrowed since the mid-1980s.

As with PPS margins, total margins vary greatly across hospital groups and for individual hospitals within any group. Both the level and distribution of total margins, however, are quite different from PPS margins. Rural hospitals, which had a lower aggregate PPS margin than urban hospitals in the eleventh year of PPS, had a higher total margin. Hospitals with the highest level of teaching intensity, which had by far the highest PPS margin, had an aggregate total margin among the lowest for any hospital group. Disproportionate share hospitals in large urban areas had a similarly high PPS margin and low total margin.

Cost Shifting

The differences between PPS and total margins indicate that the extent of cost shifting varies by hospital. There are wide disparities among hospitals in both their need and their ability to cost shift. Hospitals that experience large losses on their uncompensated care and Medicaid and Medicare patients may have a greater need to raise their revenues from private payers to make up for these shortfalls. Some hospitals may have too few private pay patients or too little leverage with private payers to use cost shifting effectively. Cost shifting thus may result in an inequitable distribution of overall hospital payments, as well as a disproportionately large burden on some payers.

With increasing pressure from some private payers, the need and ability to cost shift may be even more unequal across hospitals in the future. The pressure may be particularly intense in areas with greater managed care penetration and for hospitals with high patient care costs or large uncompensated care burdens. To the extent that their costs are high due to inefficiency, hospitals may be forced to

become more efficient. However, these changes may also affect the services that hospitals in some areas can provide, inhibiting access to care for certain populations.

POST-ACUTE CARE PROVIDERS

Payments to post-acute care providers—skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies—are among the fastest growing in the Medicare program. Medical practice pattern changes (particularly the decline in the length of acute inpatient stays), improved rehabilitation techniques, increased service capacity, and provider financial incentives have all contributed. To understand this expenditure growth better, ProPAC analyzed the relationship between fiscal year 1994 acute inpatient admissions and post-acute care provider use, as well as the overlap in patients and services across post-acute care providers.

Post-Acute Care Following a Hospitalization

Almost a quarter of Medicare beneficiaries who had a PPS hospital stay received services from at least one post-acute care provider within 30 days of being discharged. Home health agencies provided care to over half these beneficiaries and skilled nursing facilities (SNFs) furnished care to about 40 percent. Rehabilitation facilities and long-term care hospitals provided care to smaller shares of patients.

Post-acute care provider use was concentrated among patients assigned to a small number of diagnosis-related groups (DRGs) while in the hospital: Five DRGs (covering cardiac, orthopedic, and neurologic conditions) accounted for nearly a third of these patients. In 15 DRGs, mostly related to orthopedic and neurological conditions, over half of PPS patients used one or more of these providers within 30 days of being discharged.

For the vast majority of the DRGs, the inpatient length of stay was longer for beneficiaries who used a post-acute care provider than for those who did not. This could be due to differences in patient severity, variations in hospital treatment patterns, or both. Patients with more serious conditions or functional limitations causing them to stay longer in the hospital may have been more likely to use post-acute care. Alternatively, it may be that inpatient stays were longer in hospitals whose specialty was treating conditions that necessitate such care.

Financial incentives, treatment patterns, and unmeasured patient mix differences probably contributed to the observed variation in post-acute use across hospital types. Beneficiaries who were discharged from a hospital that owned a SNF unit, rehabilitation unit, or home health agency were more likely to use a post-acute care provider than those hospitalized in a facility without such capacity. This could be because it was easier for these hospitals to arrange such care for their patients and because they could benefit financially by doing so. It might also be that facilities with a more severe patient mix had developed post-acute care capacity.

Differences in Post-Acute Care Providers

Across post-acute care providers, the DRG assignments, the concentration of patients in those DRGs, and the proportion of patients who had had a prior hospitalization varied. Within provider groups, ProPAC observed differences in the length of the preceding hospital stay and in the intensity and duration of post-acute care treatment. The variation in use of services is likely due to a combination of two factors: the severity of patients' conditions or functional limitations, which affect the need for care, and differences in practice patterns, particularly for patients with complex needs.

As expected, virtually all SNF stays were preceded by a PPS hospital stay, compared with almost 60 percent of home health episodes. A higher share of beneficiaries with a rehabilitation facility or long-term hospital admission had previously been in an acute care hospital. Beneficiaries without a prior hospitalization tended to have longer post-acute care treatment—and often less intensive care—whether they used a rehabilitation facility, long-term care hospital, or home health agency. They may have received more care for chronic, rather than acute, conditions.

Generally, both the initial hospitalization and the duration of post-acute care were longer for beneficiaries who used a free-standing provider. Longer post-acute care might be necessary for patients with

more severe conditions or functional limitations. The longer acute hospitalizations may indicate that free-standing facilities received more complex patients. The beneficiaries in hospitals with their own post-acute capacity, however, may have been easier to transfer. Hospitals with post-acute providers also may have adopted treatment patterns that incorporated earlier use of post-acute services.

Similarities Across Providers

Because of technological developments and changing practice patterns, more patients can receive a broader array of services in each setting. Indeed, ProPAC found considerable overlap in the types of patients treated in post-acute care facilities. In view of this overlap, it is less clear which provider type—including the acute care hospital—is most appropriate for a given patient.

As the lines between provider types continue to blur, the Medicare program needs a better understanding of the patients, treatments, and costs associated with the various post-acute care providers. This task is complicated by the lack of a consistent patient classification scheme, which would permit meaningful comparisons of the diagnoses, severity, and functional limitations of beneficiaries in all of these settings. Further, since treatments and therapies are not recorded consistently in these sites, accurately measuring the costs of services for similar types of patients is not now possible. ProPAC plans to refine its analyses to develop additional information to help improve Medicare's payment policies and to constrain spending growth for these providers.

CONCLUSIONS

The American health care system is changing rapidly. Since the early 1990s, increases in the costs incurred by health care providers and the spending for their services have diverged from long-established trends. The patterns of utilization and expenditures across types of providers also differ from the past. New relationships have developed between and among hospitals, physicians, and other components of the health care delivery system. For their part, insurers are adopting payment methods that increase their involvement in treatment decisions. Consequently, there is closer alignment between the roles and objectives of those who deliver health care and those who pay for it.

Much of the impetus for the recent changes has come from the private sector. This has focused attention on the use of the private sector as a benchmark for assessing the trend in Medicare spending and setting targets for future growth. Doing so, however, would require consideration of several important differences between the people and services covered by the Medicare program and those covered by private insurers. The large Federal budget deficit—to which Medicare spending is a substantial contributor—and the projected insolvency of the Hospital Insurance Trust Fund emphasize the need to reexamine Medicare policies in light of the changing environment in which they are implemented.

Applying the recent developments in the private sector to the Medicare program presents both opportunities and challenges. The widespread adoption of managed care techniques has been credited with helping to control spending, eliminate unnecessary care, and improve the coordination of services across settings. To the extent that these techniques can successfully be applied to Medicare, they would benefit both the program and its beneficiaries. In addition, as a prudent payer, Medicare has an obligation to adjust its payments in the face of reductions in provider cost growth. At the same time, the Medicare program is responsible for maintaining access to care for its beneficiaries and fair and equitable payment rates to those who provide care to them. Potential changes in Medicare policies must be evaluated in that context and must strike an appropriate balance among these priorities.

Chapter 1

Government and Private Sector Spending

Chapter 1

Government and Private Sector Spending

For most of the last three decades, national health expenditures have risen faster than general inflation and population growth. Among the factors that have contributed to higher spending is the adoption of new technologies, which has increased both the demand for and the intensity of services. The nature of health care financing, characterized by third-party reimbursement through private indemnity insurance plans and public programs, also has fueled this growth. Fee-for-service payments have supported providers' inclinations to furnish more care. And, because insured people are shielded from much of the direct cost of care, they have been able to use services with little regard for price.

Recently this picture has begun to change. Employers are demanding lower premiums from insurers and requiring employees to pay a larger share of the premium. Insurers, in turn, are developing lower-priced products that incorporate capitation arrangements with providers and other managed care techniques to control their costs. Providers are forming networks to share resources, furnish services more efficiently, and compete more effectively. As a result, the rise in real per capita private health insurance spending has markedly declined.

This slowdown in private sector spending growth—and its significance relative to Medicare—has received much attention. Some have suggested using private payers' recent trend as a benchmark for gauging Medicare spending in the future. But the actual level of private spending growth and the extent to which low rates of increase will continue are uncertain. In addition, fundamental differences between the Medicare program and the private sector may prevent Medicare from attaining comparable rates of growth. These issues should be considered in assessing whether and how this rate of increase could be applied to the Medicare program.

In this chapter of its annual report to the Congress, the Prospective Payment Assessment Commission (ProPAC) presents trends in national health care expenditures and compares Medicare and private sector spending patterns over time. The chapter also examines factors that may account for differences in growth rates between Medicare and private payers, discussing the implications of each. Chapter 2 looks at the changing structure of the American health care financing and delivery system. Chapter 3 provides information on hospitals' financial condition, including payments, costs, and margins. Chapter 4 explores the relationship between acute hospital care and post-acute care as well as the overlap in services across different types of post-acute care providers.

NATIONAL HEALTH CARE SPENDING TRENDS

National health care spending increased by 6.4 percent in 1994, from $892.3 billion in 1993 to $949.4 billion (see Table 1-1). This was the smallest rise in the past 20 years, but the share of the nation's gross domestic product (GDP) devoted to health care still grew to 13.7 percent, up from 8.0 percent in 1975.[1]

Economywide inflation and population growth by far have been the largest contributors to rising aggregate expenditures. Spending soared in the late 1970s and late 1980s during periods of high general inflation (see Figure 1-1). The slowdown that followed these two periods loosely paralleled declining inflation. After removing the effects of general inflation and population growth, spending increases were much smaller and less volatile.

From 1981 to 1987, the annual rise in real (adjusted for inflation) per capita expenditures was relatively constant, ranging from 3.7 percent to 5.1 percent. In 1988, spending jumped by 6.5

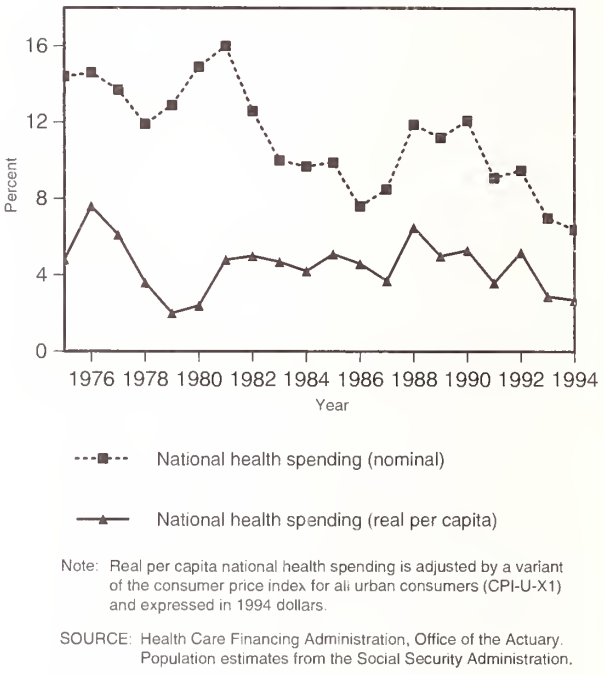
Table 1-1. National Health Spending, Selected Years

Year	Total (In Billions) Nominal	Total (In Billions) Real*	Per Capita Nominal	Per Capita Real*
1975	$130.7	$344.6	$ 582	$1,535
1980	247.2	445.8	1,052	1,896
1985	428.2	590.6	1,735	2,392
1990	697.5	791.9	2,688	3,051
1991	761.3	828.8	2,902	3,160
1992	833.6	881.1	3,144	3,323
1993	892.3	915.7	3,331	3,418
1994	949.4	949.4	3,510	3,510
Average Annual change				
1975-1980	13.6%	5.3%	12.6%	4.3%
1980-1990	10.9	5.9	9.8	4.9
1990-1992	9.3	5.5	8.2	4.4
1992-1994	6.7	3.8	5.7	2.8

* Adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars.

SOURCE: Health Care Financing Administration, Office of the Actuary. Population estimates from the Social Security Administration.

Figure 1-1. Change in National Health Spending, 1975-1994 (In Percent)



Note: Real per capita national health spending is adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars.

SOURCE: Health Care Financing Administration, Office of the Actuary. Population estimates from the Social Security Administration.

percent, the largest upswing since 1976. Since that time the rate of increase in real per capita expenditures generally has declined. In 1994, real spending per person rose by only 2.7 percent, reaching $3,510. This was the lowest rate of increase since 1980.

Trends in real per capita health care spending reflect the combined effects of many factors. The most important of these are technological change and the financing of health care services, which until recently was based predominantly on indemnity insurance and fee-for-service payment methods.

On the one hand, scientific and technological advances sometimes have resulted in lower costs per unit of service. On the other hand, they also have expanded the range of conditions that can benefit from medical intervention, contributing to higher spending. Treatment protocols have become more effective and less invasive, which has heightened the demand for services. Providers have broadened access to new technologies, at times without regard to cost or overall service need. While better outcomes and quality of care may result from improved access, spending has grown because of greater utilization and service intensity.

Traditional fee-for-service payment methods, which tie provider revenues to the quantity of services delivered, fostered the rapid rise in health care use and overall expenditures. During the 1980s, Medicare pioneered methods to control spending. The prospective payment system (PPS) for hospital inpatient services and the resource-based relative value scale (RBRVS) for physician payment successfully controlled the increase in Medicare's payment rates. These methods were less effective in curbing total program spending, however, because they had little effect on overall service use.

Because private insurers also paid providers primarily on a fee-for-service basis, they too had little control over the volume of services delivered. Moreover, many did not impose limits on payment rates to providers. Consequently, private payers (and ultimately, insurance purchasers) absorbed much of the financial pressure exerted by Medicare. Since the late 1980s, insurers have stepped up efforts to restrain their expenditures. To achieve this, many are rapidly adopting managed care techniques.

Indeed, the recent lower rates of increase in real per capita expenditures are widely believed to be a result of growing managed care enrollment in both

the private and public sectors. Managed care arrangements include health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point-of-service (POS) plans. To varying degrees, each integrates the financing and delivery of health care by arranging with selected providers to furnish a comprehensive set of services to plan enrollees. They employ various mechanisms to control the volume of services delivered, the price per unit of service, or both. These include utilization review, service coordination and oversight by primary care physicians, and risk-sharing arrangements with providers. In addition, they commonly promote disease prevention by covering such things as routine physicals, immunizations, and wellness programs. As a result, managed care plans can offer lower premiums relative to traditional indemnity insurers, and employers and other purchasers can reduce their health insurance costs by switching to such plans.

These developments have altered how health care is paid for and delivered in this country. Their effects are reflected in the changing patterns of spending by type of service and by source of payment.

Spending by Type of Service

Hospital services continue to account for the largest share of total national health spending. Hospitals received $338.5 billion in 1994, up from $52.6 billion in 1975 and $168.3 billion in 1985 (see Table 1-2). The proportion of total spending going to hospitals is declining, however.

Initial cost-containment efforts in the 1980s were aimed at controlling the growth in spending for hospital inpatient services, the most expensive type of care. At the same time, advances in technology and medical practice expanded the volume and range of procedures performed in other settings. Beginning in the late 1980s, rising enrollment in managed care plans also helped diminish the relative importance of hospital care. These plans generally substitute non-hospital care for more costly inpatient services. Both the number and use of ambulatory and post-acute care providers grew substantially. Together, these changes led to a decline in the share of total expenditures attributable to hospitals, which went from 40.2 percent in 1975 to 35.7 percent in 1994 (see Table 1-3).

Changes in practice patterns and in the nature of services provided have also altered utilization within acute care hospitals. Per capita admissions and length of stay have fallen, while the use of outpatient services has grown rapidly. Consequently, spending on hospital inpatient services dropped from 30.1 percent of total health expenditures in 1980 (before PPS was implemented) to 22.4 percent in 1994. Meanwhile, the proportion of expenditures attributed

Table 1-2. National Health Spending, by Sector, Selected Years (In Billions)

Sector	1975	1980	1985	1990	1992	1994
Total	$130.7	$247.2	$428.2	$697.5	$833.6	$949.4
Hospitals	52.6	102.7	168.3	256.4	305.3	338.5
Inpatient[a]	36.9	74.4	119.2	169.2	196.2	212.4
Outpatient[a]	4.9	11.2	24.2	52.4	71.3	86.7
Other[b]	10.8	17.1	24.9	34.8	37.8	39.4
Nursing facilities	8.7	17.6	30.7	50.9	62.3	72.3
Home health agencies	0.6	2.4	5.6	13.1	19.6	26.2
Physicians	23.9	45.2	83.6	146.3	174.7	189.4
Other personal health care[c]	28.7	49.1	88.2	147.8	177.9	205.4
Other spending[d]	16.2	30.2	51.8	82.8	93.8	117.7

Note: Columns may not sum to total due to rounding.

[a] Includes patient care spending in community hospitals.

[b] Includes patient care spending in Federal and noncommunity hospitals, and non-patient care revenues in all hospitals.

[c] Includes dental services, other professional services, drugs and other medical non-durables, vision products, and other medical durables.

[d] Includes research, construction, public health activity, administrative costs of health insurers, and net cost of insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table 1-3. Share of National Health Spending, by Sector, Selected Years

Sector	1975	1980	1985	1990	1992	1994
Hospitals	40.2%	41.5%	39.3%	36.8%	36.6%	35.7%
Inpatient[a]	28.2	30.1	27.8	24.3	23.5	22.4
Outpatient[a]	3.8	4.5	5.7	7.5	8.6	9.1
Other[b]	8.2	6.9	5.8	5.0	4.5	4.2
Nursing facilities	6.6	7.1	7.2	7.3	7.5	7.6
Home health agencies	0.5	1.0	1.3	1.9	2.4	2.8
Physicians	18.3	18.3	19.5	21.0	21.0	19.9
Other personal health care[c]	22.0	19.9	20.6	21.2	21.3	21.6
Other spending[d]	12.4	12.2	12.1	11.9	11.2	12.4

Note: Columns may not sum to 100 due to rounding.

[a] Includes patient care spending in community hospitals.

[b] Includes patient care spending in Federal and noncommunity hospitals, and non-patient care revenues in all hospitals.

[c] Includes dental services, other professional services, drugs and other medical non-durables, vision products, and other medical durables.

[d] Includes research, construction, public health activity, administrative costs of health insurers, and net cost of insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary.

to hospital outpatient services doubled, rising from 4.5 percent of total spending in 1980 to 9.1 percent in 1994.

Spending for non-hospital care also has grown substantially due to the greater number and range of services furnished by physicians and other ambulatory care providers, nursing facilities, and home health agencies. This trend reflects both the substitution of these services for acute inpatient care and the absolute growth in the total number of services.

Spending for physician services—the second largest single category—was $189.4 billion in 1994. The share of total expenditures devoted to physician services, which rose from 18.3 percent in 1980 to 21.0 percent in 1990, fell to 19.9 percent in 1994. The recent decline is probably related to Medicare's RBRVS and the expansion of managed care, which have slowed the growth in payments to physicians.

Expenditures for nursing home care were $72.3 billion in 1994, or 7.6 percent of total national health care dollars. Because growth in nursing home spending is close to the national average, this sector's share of aggregate spending is only slightly more than it was in 1980. By contrast, home health care expenditures have risen more than 10 percentage points faster than general inflation in all but two of the past 20 years. Spending reached $26.2 billion in 1994, or 2.8 percent of total expenditures, whereas in 1980 it accounted for only 1.0 percent.

Spending by Payment Source

Much of national health care spending is financed through private health insurance and government programs for the elderly and the poor. Private sources spent $528.6 billion in 1994 (see Table 1-4). The majority ($313.3 billion) came from group insurance sponsored by private and public employers and from individual private policies. Direct out-of-pocket spending by consumers for amounts not covered by insurance (copayments and deductibles) and use of noncovered services accounted for $174.9 billion. Federal, state, and local government programs spent $420.8 billion on health care in 1994. Most of this was for Medicare and Medicaid.

The shares of total national health expenditures attributable to Medicare and Medicaid have grown (see Table 1-5). Except for the six-year period following implementation of PPS, Medicare's proportion has risen steadily. As for Medicaid, its share of total spending jumped in the early 1990s following a period of relative stability throughout much of the 1970s and 1980s. Private health insurers' proportion of total health care spending also has increased substantially, from 23.9 percent in 1975 to 33.0 percent in 1994. By contrast, individual out-of-pocket spending dropped from 29.1 percent of the total in 1975 to 18.4 percent in 1994.

Table 1-4. National Health Spending, by Payment Source, Selected Years (In Billions)

Payment Source	1975	1980	1985	1990	1992	1994
Total	$130.7	$247.2	$428.2	$697.5	$833.6	$949.4
Medicare	16.4	37.5	72.2	112.1	138.7	169.2
Medicaid	13.5	26.1	41.2	75.4	106.9	129.3
Other government programs[a]	25.1	41.1	60.9	96.9	111.0	122.3
Private	75.7	142.5	253.9	413.1	477.0	528.6
Health insurance[b]	31.3	69.7	132.3	232.4	276.6	313.3
Out of pocket[c]	38.1	60.3	100.6	148.4	164.4	174.9
Other[d]	6.3	12.5	21.1	32.3	36.0	40.4

Note: Columns may not sum to total due to rounding.

[a] Includes Departments of Defense and Veterans Affairs; Public Health Service; Federal research; Federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

[b] Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

[c] Includes all payments (other than premiums) by individuals, such as deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

[d] Includes industrial in-plant health services, provider non-patient revenues, private donations, and privately financed construction.

SOURCE: Health Care Financing Administration, Office of the Actuary.

The changing relative importance of these payment sources reflects differences in growth rates among payers. In general, the cumulative increase in real direct out-of-pocket expenditures has been much lower and more stable than that for Medicare, Medicaid, and private insurers (see Figure 1-2). In fact, out-of-pocket spending has grown very slowly since 1989. This trend is likely due to various factors, including broader private insurance coverage for dental care and outpatient prescription drugs, and growth in the Medicare and Medicaid populations. Real Medicaid spending, which grew steadily from 1975 through the late 1980s, began to rise sharply in 1990. This resulted from policies that expanded eligibility and an infusion of Federal funds to hospitals serving a disproportionate share of low-income patients.[2]

By contrast, Medicare and private payer expenditures have risen faster for most of the past two decades. The overall trend for each was similar until recently, with the private sector's cumulative increase somewhat below Medicare's in the early and mid-1980s, and Medicare's lower through the

Table 1-5. Share of National Health Spending, by Payment Source, Selected Years

Payment Source	1975	1980	1985	1990	1992	1994
Medicare	12.5%	15.2%	16.9%	16.1%	16.6%	17.8%
Medicaid	10.3	10.6	9.6	10.8	12.8	13.6
Other government programs[a]	19.2	16.6	14.2	13.9	13.3	12.9
Private	57.9	57.6	59.3	59.2	57.2	55.7
Health insurance[b]	23.9	28.2	30.9	33.3	33.2	33.0
Out of pocket[c]	29.1	24.4	23.5	21.3	19.7	18.4
Other[d]	4.8	5.0	4.9	4.6	4.3	4.3

Note: Columns may not sum to 100 due to rounding.

[a] Includes Departments of Defense and Veterans Affairs; Public Health Service; Federal research; Federal, state, and local workers' compensation; subsidies to hospitals; and public health activities.

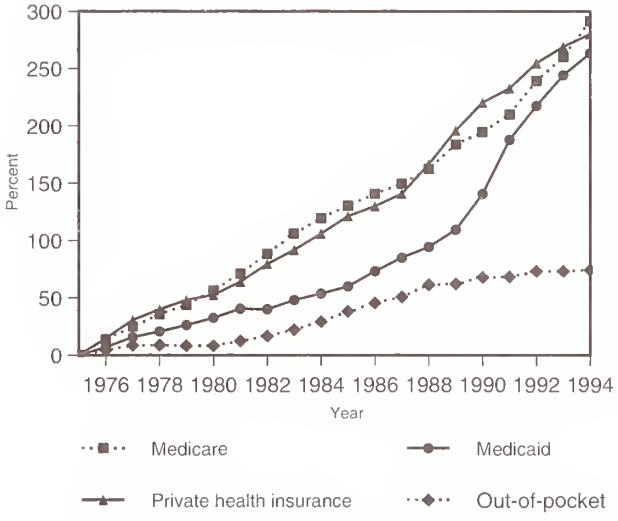
[b] Includes premiums paid by employers or unions, employees' share of employer- or union-sponsored premiums, and premiums paid by people with individual policies.

[c] Includes all payments (other than premiums) by individuals, such as deductibles and copayments required by private insurers and public programs when not covered by supplemental insurance.

[d] Includes industrial in-plant health services, provider non-patient revenues, private donations, and privately financed construction.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Figure 1-2. Cumulative Growth in Real Health Care Spending, by Payment Source, 1975-1994 (In Percent)



Note: Real spending adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1).

SOURCE: Health Care Financing Administration, Office of the Actuary.

rest of the decade and into the 1990s. However, the rate of increase in private spending began to slow in 1990, while Medicare's spending began to accelerate in 1991. As a result, the cumulative growth in real Medicare expenditures exceeded that for private payers again in 1994.

Sustained growth in Medicare spending puts tremendous pressure on the solvency of the Federal Hospital Insurance (HI or Part A) Trust Fund. Financed primarily through a dedicated payroll tax paid by employers, employees, and the self-employed, this fund covers beneficiaries' use of hospital inpatient services and most post-acute care.

On several occasions, the Hospital Insurance Board of Trustees has projected that the HI Trust Fund faced insolvency within a decade or less. Bankruptcy has not occurred because the Congress has acted to prevent the fund's depletion.[3] The Trustees' 1995 projection that the fund would be exhausted by 2002 created much more concern than previous projections, however.[4] This is because fund outlays are expected to significantly exceed revenues during 1996 (as they did by a small amount in 1995) causing the fund's assets to shrink. Moreover, the ratio of tax-paying workers to Medicare enrollees will decline sharply in about 15 years, when the baby boom generation begins to reach 65. Consequently, under current policies, the imbalance between trust fund income and disbursements will worsen even more rapidly early in the next century.

Continued growth in Medicare expenditures for physician services, hospital outpatient care, and other services covered under Medicare's Supplementary Medical Insurance program (SMI or Part B) also has contributed to higher Federal spending. This is because Part B spending is financed partly by enrollee premiums but mostly by general tax revenues. Under current policies, total Medicare (Part A and Part B) spending is expected to account for 12 percent of Federal outlays in 1996 and almost 16 percent in 2002.[5]

MEDICARE AND PRIVATE SECTOR SPENDING

The Congress and the President devoted considerable effort last year to developing proposals for reforming the Medicare program to help curb spending increases, strengthen the HI Trust Fund, and balance the Federal budget. During the debates on this issue, Federal lawmakers and others advocated using the private sector's recent lower rate of expenditure growth as a benchmark for future Medicare spending increases.[6] This is an obvious reference point given that the Medicare program originally was modeled after private insurance plans and is inextricably tied to the private health care financing and delivery system. But this comparison is more complicated than it appears.

Conflicting measures based on various data sources have been used to represent the level of private sector spending growth. In addition, the extent to which slower growth in the private sector will continue is uncertain. Further, Medicare differs from the private sector in important ways that affect both relative spending levels and yearly changes in expenditures. While some differences could be minimized by changes in Medicare's policies, others are likely to persist. Therefore, adjustments for these factors would be necessary if the private rate of increase were used as a standard for Medicare. Finally, although the slowdown in private sector spending has attracted a lot of attention, alternative benchmarks could be considered, such

as the annual increase in per capita GDP or some measure of general or health care price inflation. These alternatives have different strengths and weaknesses, but would raise many of the same issues.

Comparability of Spending Estimates

There are two primary measures of private sector spending: health insurance premiums and national health expenditures. Premium data have been cited as evidence that private sector spending has slowed relative to Medicare's. A more accurate comparison using national health expenditure data indicates that real per capita spending trends for both have been similar for the last 20 years. Since 1989, however, the private sector's spending growth generally has declined, while Medicare's has gradually accelerated. Nevertheless, Medicare's rate of increase exceeded that of the private sector only in 1994.

Private Insurance Premiums—Two well-known sources of data on health insurance premiums are the annual surveys of public and private employers conducted by Foster Higgins and by KPMG Peat Marwick LLP.[7] Both estimate the average employer-sponsored group health insurance premium per employee (including employers' and workers' contributions). But they differ with respect to sample and survey design, employer response rates, and the manner in which premiums are disaggregated and reported. In addition, comparable estimates have been available only since 1988.

Foster Higgins data suggest that the rate of growth in private insurance premiums is slowing down. The average annual health insurance premium for employees, retirees, and covered dependents per active worker rose by 2.1 percent in 1995.[8] This followed a 1.1 percent decline in 1994 and an 8.0 percent increase in 1993. But these figures do not control for changing enrollment among types of plans. Therefore, they reflect the one-time savings that occur as people switch from indemnity insurance to lower-cost managed care plans, as well as changes in premium rates for a given plan.

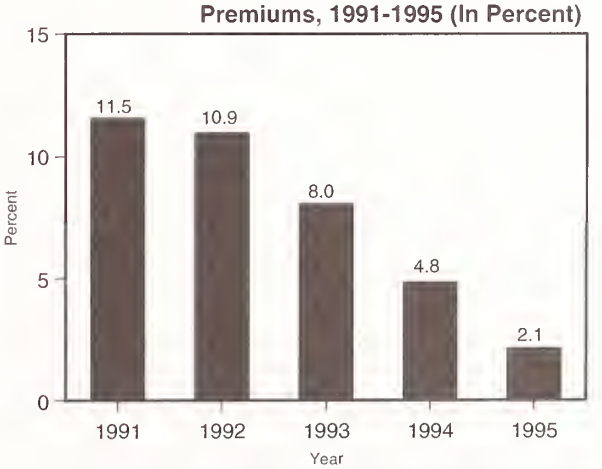
KPMG, by contrast, calculates annual changes in premiums for health plans that employers offered in the previous year.[9] Based on this method, KPMG reported that the weighted average increase in per employee premiums for all types of plans dropped from 11.5 percent in 1991 to 2.1 percent in 1995 (see Figure 1-3). Premium growth for indemnity insurance and HMOs steadily dropped over this period, whereas growth for PPOs and POS plans fluctuated.

The Foster Higgins and KPMG surveys show broadly similar overall trends of declining premium growth. Premiums, however, do not accurately measure trends in private sector spending. They include non-patient care amounts such as profits and changes in reserves. In addition, both firms' estimates are based on sample surveys and are subject to sampling variability. For these reasons, reported changes in employers' premiums should be interpreted with caution.

National Health Expenditures—A better source of information on private sector spending is the national health accounts developed each year by the Health Care Financing Administration (HCFA). These data provide comprehensive estimates of expenditures by private insurers and Medicare that are comparable over time.

HCFA's estimates of private insurance expenditures reflect premiums paid by employers, unions, employees, and retirees for group insurance; premiums for individual coverage, including Medicare supplemental policies; and comparable amounts paid by firms that self-insure. Out-of-pocket expenditures and other private spending such as donations, payments for non-patient-related services, and the costs of industrial

Figure 1-3. Growth in Health Insurance Premiums, 1991-1995 (In Percent)



Note: Includes only premiums for group insurance sponsored by public and private employers with 200 or more workers.

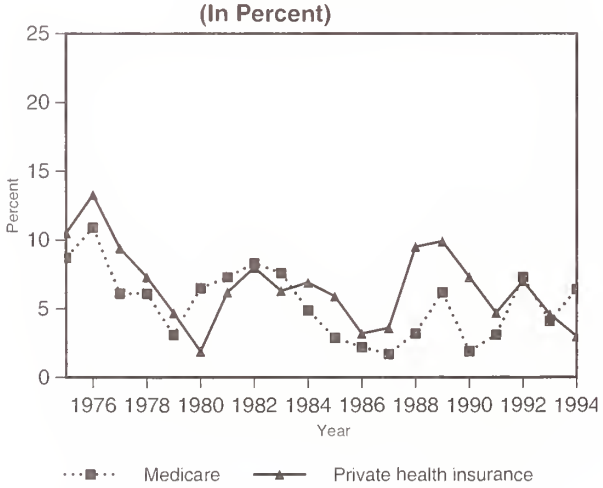
SOURCE: KPMG Peat Marwick LLP, *Health Benefits in 1995.*

health care services are excluded and reported separately. Estimates of Medicare spending are based on program payments to providers plus administrative costs.[10] These data also exclude enrollee deductibles, copayments, and balance billing amounts, which are part of private out-of-pocket spending.

Medicare's real per capita spending growth has been lower than private payers' for most of the last two decades (see Figure 1-4). The general trends, however, have been similar. After falling in the late 1970s, the rates of increase in real per capita expenditures for Medicare and private payers rose in the early 1980s, though Medicare's were higher. Growth rates began to fall in 1984 after Medicare implemented PPS.[11] At the same time, medical advances led to the shift of many surgical procedures to ambulatory care settings. As a result, acute inpatient admissions, which had been dropping for the younger population since the early 1980s, fell among Medicare beneficiaries as well. Accordingly, the growth rates in both Medicare and private sector spending slowed through 1987, but Medicare's was lower.

Expenditure increases accelerated for both private insurers and Medicare in 1988 and 1989 due to the combined effects of several factors. Technological advances continued to stimulate rapid expansion in the volume of ambulatory care services. Additionally, the Medicare Catastrophic Coverage Act of 1988 (MCCA) and changes in Medicare's administrative policies expanded coverage for skilled nursing and home health services.[12] To offset financial pressure from Medicare, hospitals obtained higher payments from private insurers. Consequently, private payers' spending growth remained higher than Medicare's.

Figure 1-4. Change in Real Per Capita Medicare and Private Health Insurance Spending, 1975-1994 (In Percent)



Note: Real per capita Medicare and private health spending are adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars.

SOURCE: Health Care Financing Administration, Office of the Actuary.

In 1990, however, the rate of increase for private payers began to fall. This is widely attributed to the rapid growth in managed care enrollment. Real per capita expenditures rose by only 3.0 percent in 1994, the lowest rate since 1980. Meanwhile, Medicare's real per capita spending has gradually accelerated due to rising hospital admissions and unbridled growth in post-acute care use.

The Interaction Between Medicare and Private Insurers

When comparing Medicare and private payer spending trends, it is important to remember that both operate within the same health care delivery system. Consequently, actions taken by one generally have affected the other.

The Congress enacted the Medicare program in 1965 to provide health benefits to the elderly using the private health care financing and delivery system but without unduly changing that system.[13] Accordingly, Medicare was modeled after existing private insurance plans with similar benefits, enrollee cost-sharing requirements, and provider payment methods. With a social program of this size, however, changes to the system as a whole were unavoidable.

Medicare policies designed to ensure access to quality care were major improvements to the existing system and became the standard for private insurers. The large infusion of revenues strengthened providers' financial condition, fostered the expansion of service capacity, and funded the adoption of medical and technological advances. These developments further stimulated demand for both the Medicare and privately insured populations.

Medicare's policies continued to affect the delivery system (and therefore private insurers) during the 1980s. PPS constrained Medicare payment rates, imposing pressure on hospitals to control their costs. Following an initial decline in the early years of PPS, however, hospital cost increases returned to

their pre-PPS levels, outpacing the growth in Medicare payments. Consequently, Medicare's aggregate hospital payment to cost ratio dropped from 1.01 in 1986 to 0.88 in 1991 (see Table 1-6). Hospital losses from Medicaid also mounted during this period because of expanded enrollment and cost constraints initiated by some states.

Hospitals offset these losses by obtaining higher payments (relative to their costs) from private payers. This is reflected in private insurers' hospital payment to cost ratio, which rose from 1.16 in 1986 to 1.30 in 1991. Insurers were able to pay hospitals more than the costs of treating their subscribers because they could raise premiums to employers and individuals. Businesses, in turn, passed on rising insurance costs through higher prices to consumers and smaller wage increases for workers.

Eventually, though, employers began to demand lower premiums from insurers. Many private insurers responded by developing managed care products and negotiating discounts with providers to restrain their own growing expenditures. Under mounting financial pressure from private insurers, many providers started to control their costs. Hospitals' real total expenses per adjusted admission, which had been increasing about 5 percent per year in the late 1980s, actually declined by 1 percent in 1994 (see Figure 1-5).

Table 1-6. Hospital Payment to Cost Ratios for Medicare, Medicaid, and Private Payers, 1980-1994

Year	Medicare	Medicaid	Private
1980	0.96	0.91	1.12
1981	0.97	0.93	1.12
1982	0.96	0.91	1.14
1983	0.97	0.92	1.16
1984	0.98	0.88	1.16
1985	1.01	0.90	1.16
1986	1.01	0.88	1.16
1987	0.98	0.83	1.20
1988	0.94	0.80	1.22
1989	0.91	0.76	1.22
1990	0.89	0.80	1.27
1991	0.88	0.82	1.30
1992*	0.89	0.91	1.31
1993*	0.89	0.93	1.29
1994	0.97	0.94	1.24

Note: Payments and costs include both inpatient and outpatient services. These ratios cannot be used to compare payments per service among payers. This is because both the mix of services and the cost per unit of service vary across payers. They do, however, indicate the relative degree to which payments from each payer cover the costs of treating its patients.

* Due to reporting inconsistencies related to Medicaid disproportionate share payments and provider-specific taxes, there are significant margins of error for these years.

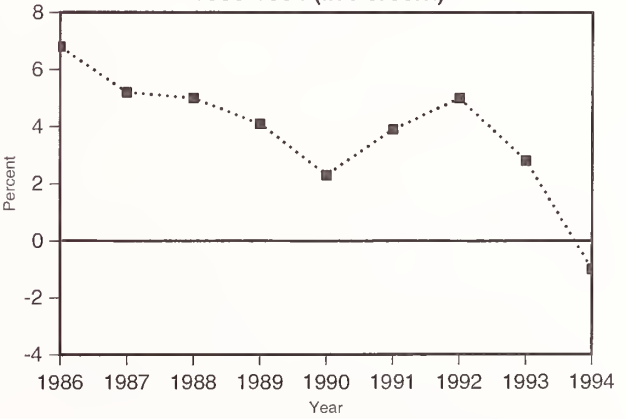
SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

Private payers' payment to cost ratio fell from 1.31 in 1992 to 1.24 in 1994. Medicare payments, however, rose faster than hospitals' Medicare costs. As a result, Medicare's payment to cost ratio increased from 0.89 in 1992 to 0.97 in 1994. In fact, for some hospitals, Medicare may be underwriting the private sector's recent decline in spending growth.

Reasons for Differences in Spending

Per capita spending increases for Medicare and private insurers have differed in the past and may continue to do so for several reasons. One is disparate growth in service use that is related to changes in covered populations, technology, and health plan design. Another is that the savings from moving to managed care may not be as great for Medicare as they have been for private payers. Finally, reductions in private sector support for valued activities, such as medical education and care for the poor, are not likely to be easily achieved by Medicare. These issues should be considered in assessing whether and how private payers' rate of spending growth could be applied to Medicare.

Figure 1-5. Change in Real Total Hospital Expenses Per Adjusted Admission, 1986-1994 (In Percent)



Note: Expenses adjusted by the consumer price index for all urban consumers (CPI-U).

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

Table 1-7. Real Per Capita Medicare and Private Health Insurance Spending, by Sector, Selected Years

Year	Payer	Amount	Sector (In Percent)					
			Hospital	Physician	Home Health Agency	Nursing Facility	Other	Program Administration
1975	Medicare	$1,729	70.5%	20.6%	1.2%	1.3%	2.0%	4.4%
	Private	522	55.3	27.0	0.2	0.2	7.9	9.3
1980	Medicare	2,374	70.5	21.3	1.7	0.8	2.7	3.0
	Private	741	52.3	24.6	0.6	0.3	11.2	11.1
1985	Medicare	3,201	68.0	22.8	2.2	0.6	3.7	2.7
	Private	1,023	44.4	25.3	0.6	0.6	15.1	14.0
1990	Medicare	3,721	62.2	26.3	2.7	1.5	5.1	2.2
	Private	1,412	40.4	27.2	1.0	0.8	17.4	13.2
1992	Medicare	4,119	62.4	22.9	4.3	2.3	6.1	2.1
	Private	1,583	38.3	29.4	1.0	0.8	18.2	12.2
1994	Medicare	4,562	60.1	22.5	5.6	3.5	6.4	1.8
	Private	1,706	36.9	28.6	1.1	0.7	17.8	14.8

Note: Real per capita spending adjusted by a variant of the consumer price index for all urban consumers (CPI-U-X1) and expressed in 1994 dollars. Rows may not sum to 100 due to rounding.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Utilization—The Medicare program insures the elderly, disabled, and individuals with end-stage renal disease (ESRD). Because these populations generally have poorer health status, they use more (and a costlier mix of) services than the privately insured (see Table 1-7). Home health and nursing home care, for example, account for larger shares of Medicare expenditures, whereas spending for physicians' services is greater for the privately insured.

Growth in Medicare and private sector service use may differ in the future because the composition of the Medicare population is changing. The number of disabled and ESRD beneficiaries is growing faster than those 65 and over.[14] While per capita expenditures for disabled and elderly beneficiaries are similar, they are higher for ESRD enrollees. In 1994, per capita spending for these enrollees was about six times greater than spending for all other beneficiaries.[15]

The amount and mix of services used may also change over time in response to specific advances in technologies. Progress in certain areas, such as treatment for strokes or Alzheimer's disease, may have a different effect on spending for Medicare beneficiaries than for the privately insured.

Changes in health plan design also affect service use. Private businesses and insurers have the flexibility to add or drop benefits, change cost-sharing requirements, and impose direct controls on utilization. For example, many employers that once offered mental health and substance abuse benefits have established coverage limits or no longer cover these services. They also raised deductibles and copayments, which lower plan spending (and premiums) by shifting more of the cost of service use to enrollees and by reducing the demand for services.[16] In addition, to limit unnecessary service use, they have adopted techniques such as precertification of hospital admissions, concurrent review, and case management by primary care physicians.

Health plans are continuing to develop new products and change their cost-sharing structures to compete more effectively as managed care enrollment expands.[17] Benefit packages within and across private plans may change from year to year,

which makes it hard to compare them with Medicare benefits. Similar rates of expenditure growth have been shown for basic services covered by both Medicare and private payers.[18] But this comparison may be misleading if the use of common services is related to the use of the other services covered.

Because Medicare is a publicly financed entitlement program for the elderly and disabled, many of whom are poor, it has less flexibility to change its benefit design. This is because such changes typically are seen as social equity issues. Thus, covered benefits and beneficiary cost-sharing requirements have remained fairly stable since Medicare began.[19]

Moreover, Medicare's cost-sharing provisions have relatively little effect on most beneficiaries' use of services. This is because the vast majority of enrollees have some form of supplemental insurance that covers different combinations of deductibles, copayments, and balance billing amounts. Accordingly, they face lower direct out-of-pocket payments and, on average, use more services than those without such coverage.[20] Consequently, though raising cost-sharing requirements would directly reduce program spending, it probably would not lower service use appreciably.

Further, private enrollment has largely moved from indemnity insurance to managed care plans. HMOs, PPOs, and POS plans employ a variety of direct utilization controls. Medicare, by contrast, still relies primarily on fee-for-service payment methods and places few restrictions on beneficiary service use. Consequently, growth in service use is likely to continue to be greater for Medicare beneficiaries than for the privately insured.

The Shift to Managed Care—As noted above, the recent slowdown in the growth of real per capita private insurance spending has been widely attributed to the extensive shift in enrollment from traditional indemnity insurance plans to less costly managed care plans. Many think a similar shift of Medicare beneficiaries into managed care plans would lead to a comparable decline in the growth of program spending. Although greater reliance on managed care alternatives certainly could help restrain Medicare's spending growth, the effect may not be as large or occur as rapidly as in the private sector.

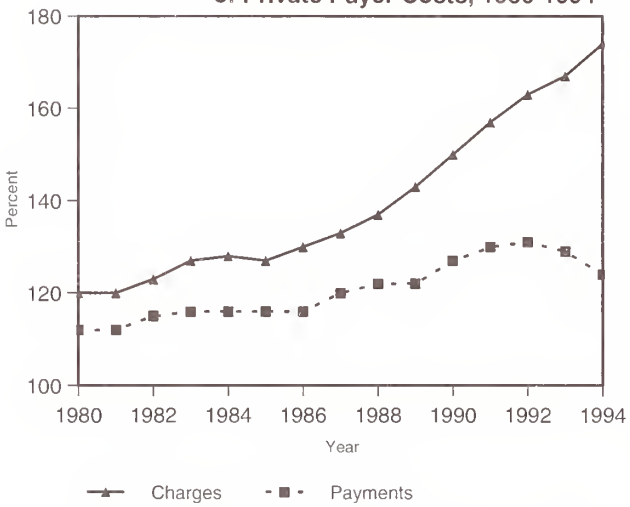
There are three reasons for this. Managed care plans may not be able to reduce costs as much when they serve Medicare enrollees as they have for the privately insured population. Even if they could realize similar savings, the effect on Medicare's spending would be limited by key features of its managed care program's current design. Finally, although Medicare managed care enrollment has been growing, the shift into these plans has been—and may continue to be—slower than in the private sector.

Potential for Savings by Medicare Managed Care Plans—In the private sector, managed care plans have established and maintained lower costs, relative to traditional indemnity insurers, by obtaining payment discounts from providers and by controlling the volume and mix of subscribers' service use. Plans have successfully negotiated payment discounts, in part, because private payers' payment rates traditionally have been well above providers' costs. Providers have been willing to grant discounts because managed care plans can direct (or strongly influence) the flow of patients. In addition, excess service capacity has stimulated providers to compete for managed care contracts to preserve or expand their market share.

The growing disparity between hospitals' charges and private payers' payments since the early 1990s reflects the widespread use of discounts. Hospitals' charges were 74 percent above costs in 1994 (see Figure 1-6). But payments fell to 24 percent above costs, well below the 31 percent level of 1992. Compared with the private payer payment to cost ratios that prevailed in the early 1980s, the 1994 ratio was still quite high. This suggests that private payers may be able to save more (through larger discounts) in the future, thus prolonging low spending growth.

By contrast, Medicare's payments to hospitals in 1994 represented only 97 percent of the costs of furnishing services to program beneficiaries. Since Medicare's payment rates are already low, managed care plans serving beneficiaries are likely to have much less opportunity to generate savings by obtaining further payment discounts from providers.

Figure 1-6. Private Payer Hospital Charges and Payments as a Percentage of Private Payer Costs, 1980-1994



Note: Due to reporting inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, the numbers for 1992 and 1993 include significant margins of error.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

This means that plans would have to achieve disproportionate reductions in the volume (or changes in the mix) of services used by their Medicare enrollees to attain overall savings comparable to those in their private business. Medicare beneficiaries use more services than privately insured persons. Therefore, managed care plans' savings from managing service use may be greater for Medicare beneficiaries than they have been for the privately insured. But the additional savings from managing service use would have to be substantial to make up for smaller savings from provider discounts.

Limitations on Medicare's Ability to Share in Plan Savings—Even if managed care plans could generate similar savings in serving Medicare enrollees, however, those savings would not reduce spending under the program's current design. This is due to the way in which Medicare's payments to managed care plans are determined, and how plans' savings are treated. Medicare's payments are set at 95 percent of per capita fee-for-service program spending in the enrollee's county of residence. Medicare retains the other 5 percent as savings.

In the private insurance market, employers and other purchasers can and do negotiate with plans over premiums, covered benefits, cost-sharing provisions, and other features of plan design. By contrast, there is little interaction between Medicare and participating managed care plans. Payment rates are set without regard to plan performance or market circumstances.

If Medicare's payments are higher than the plan's projected costs (which include an allowance for profits), the savings can be returned to the program. However, Medicare also allows plans to return any savings to beneficiaries in the form of additional benefits.[21] Plans have a strong incentive to do this because offering additional benefits helps to attract beneficiaries. Therefore, other than the 5 percent Medicare takes from the rate, any savings generally go either to the enrolled beneficiaries or to the plan as additional profits.

These design features could be changed so that Medicare would share more fully in the benefits of managed care. Allowing Medicare a larger portion of the savings, however, would detract from HMOs' financial incentives to participate in the program, or from the additional benefits that entice beneficiaries to enroll. Even without these tradeoffs, there is reason to doubt that a large national public program like Medicare ever could have (or exercise) as much flexibility as private purchasers enjoy. Consequently, Medicare may not be able to benefit as much from the shift to managed care as has the private sector.

The Rate of Growth of Managed Care Enrollment—The size and timing of the potential decline in Medicare spending growth also depend on how rapidly beneficiaries join managed care plans. Under current policies, beneficiary enrollment is voluntary, and the options are often more limited than those commonly available in the private sector. In some geographic areas, many plans participate in the Medicare program; in others, there may be only one or none at all. (See Chapter 2.)

This means that Medicare's overall spending will continue to be driven, at least in the near term, by growth in the fee-for-service portion of the program. Although Medicare has been successful in controlling its payments per unit of service for high-cost, high-use services (mainly hospital inpatient services and physician services), it has been unable to control the volume of services beneficiaries use. To the extent that recent volume growth

continues (especially for post-acute care), Medicare's per capita spending growth is likely to remain higher than that under private insurance.

Medicare's Broader Role—Traditionally, Medicare has played a major role in financing care for the poor, graduate medical education and other training programs, and clinical research through explicit hospital payment adjustments and direct subsidies. Private payers also have supported these activities, but indirectly by paying providers more than their costs. As private payers continue to curtail their spending by reducing provider payments, this source of indirect funding will dwindle. Attempts to reduce Medicare's support would likely meet with resistance, however, because the decline in private funding would tend to magnify the importance of Medicare's role. This also is likely to contribute to higher Medicare spending growth relative to that of private insurers.

IMPLICATIONS FOR THE FUTURE

Medicare and private sector real per capita spending patterns have been similar for the past 20 years, with Medicare's rate of increase generally less than private insurers' from 1984 through 1991. Recently, private payer spending has decelerated, presumably due to expanding managed care enrollment. This trend has generated interest in using the private sector's experience as a benchmark for the Medicare program. Since the two are highly interdependent, they might be expected to continue to have similar rates of spending growth. Moreover, many believe that the changes taking place in the private market could also improve the efficiency of health care delivery for Medicare beneficiaries. Using the private sector experience or any other benchmark as a standard for Medicare, however, requires careful consideration.

The private sector may not provide a stable target for the Medicare program, at least in the near term. The rapid change now occurring within the private sector is likely to persist as insurers continue to develop new products to function in an increasingly competitive market. Premium increases may remain small if plans can negotiate deeper discounts with providers and effectively manage the volume and intensity of services they deliver. They may be less able to do this, though, as excess capacity declines and the differential between payments and costs diminishes. Consequently, the lower private sector spending trend may stabilize at some point, but when this will happen is uncertain.

Structural differences between traditional indemnity insurance and managed care plans account for much of the recent disparity between Medicare and private sector expenditure growth. As Medicare managed care enrollment expands, these dissimilarities will diminish and spending patterns may begin to converge. Until that happens, a benchmark based on private payer spending growth should recognize these differences. Even then, some disparity in spending growth may persist because Medicare beneficiaries differ from the privately insured.

A final consideration relates to the Medicare program's broader social role in supporting care for vulnerable populations and medical education. As pressure to curb health spending mounts and both public and private sector provider payments are constrained, facilities carrying out these vital activities may be severely disadvantaged. The implications of applying the private sector's rate of spending growth as a standard for Medicare must be considered in this context.

Notes to Chapter 1

1. ProPAC analysis of health expenditure data from the Health Care Financing Administration, Office of the Actuary; GDP estimates from the Department of Commerce, Bureau of Economic Analysis.

2. John Holahan, David Liska, and Karen Obermaier, *Medicaid Expenditures and Beneficiary Trends, 1988-1993* (Washington, DC: Kaiser Commission on the Future of Medicaid, 1994).

3. At different times, the Congress has raised both the payroll tax rate and the earnings ceiling subject to the tax to increase HI Trust Fund revenues. It has also enacted a number of payment policies to curb Part A expenditure growth and slow the rate of growth in trust fund disbursements.

4. *1995 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund*, Washington, DC, April 1995.

5. Congressional Budget Office. These estimates do not offset the portion of spending financed by Medicare Part B premiums.

6. The Congress's budget proposal targeted $227 billion in savings from the Medicare program over seven years. The vast majority was to come from lower increases in fee-for-service payments to providers. Raising the Part B premium, imposing a total spending cap per enrollee, and expanding Medicare's managed care program also were included. Under this proposal, aggregate Medicare spending would rise by 7.2 percent annually, which is comparable to private payers' aggregate expenditure growth in 1993.

7. The following benefits consulting firms also publish data on private sector health care spending: Hay/Huggins Co. Inc., Arthur Andersen's Enterprise Group, and Milliman and Robertson Inc. In addition, the U.S. Departments of Labor and Commerce survey employers annually.

8. Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995* (New York: Foster Higgins, 1996). This survey reports health insurance costs for employees, retirees, and dependents divided by the number of active workers. Consequently, annual changes in average costs are sensitive to variations in the number of retirees who have coverage relative to the number of active workers. This survey reported that the number of employers offering retiree coverage is declining. In addition, the estimates may have been affected by recent corporate downsizing that lowered the number of active workers.

9. KPMG Peat Marwick LLP, *Health Benefits in 1995* (San Francisco: KPMG, 1995). These data include only premiums for group insurance sponsored by public and private employers with 200 or more workers.

10. Administrative expenses include the costs of both administering the Medicare program and collecting payroll taxes to finance the Hospital Insurance Trust Fund.

11. Peer Review Organizations also were authorized to deny payment for acute hospital admissions judged to be inappropriate or unnecessary.

12. In response to a class action lawsuit filed in 1987, HCFA clarified coverage guidelines for the skilled nursing and home health care benefits. As a result, more beneficiaries applied for skilled nursing facility care and more home health care visits qualified for coverage. Medicare skilled nursing facility and home health utilization and spending dropped in 1990 after the MCCA was repealed. However, because of the continuing effects of the coverage clarifications, use and expenditures did not return to pre-MCCA levels.

13. The 1972 amendments to the Social Security Act extended Medicare benefits to certain disabled people and those with end-stage renal disease.

14. Since 1990, total Medicare enrollment has grown at about 2.0 percent each year, although the rate of increase slowed to 1.7 percent in 1994. The number of disabled and ESRD beneficiaries, however, grew much faster, averaging

about 6.2 percent annually from 1990 to 1994. Health Care Financing Administration, Bureau of Data Management and Strategy.

15. Health Care Financing Administration, Office of the Actuary.

16. Joseph Newhouse and others, *Free For All? Lessons from the RAND Health Insurance Experiment* (Cambridge: Harvard University Press, 1993).

17. Foster Higgins, *National Survey of Employer-Sponsored Health Plans.*

18. Marilyn Moon and Stephen Zuckerman, *Are Private Insurers Really Controlling Spending Better Than Medicare?* (Washington, DC: Urban Institute, July 1995).

19. The Part A deductible and copayment amounts rise annually. The increase is based on an actuarial formula that accounts for the annual update to the PPS standardized amount and increases in the aggregate case-mix index. The Part B deductible is legislated by the Congress. Originally set at $50, it was increased to $60 in 1973, to $75 in 1982, and to $100 in 1991.

20. George Chulis and others, "Health Insurance and the Elderly: Data from MCBS," *Health Care Financing Review* 14(3): 163-81, Spring 1993.

21. Additional benefits may include, for example, furnishing services or supplies that Medicare does not cover, or reducing the usual cost-sharing amounts for Medicare-covered services.

Chapter 2

Changes in Health Care Delivery and Financing

Chapter 2

Changes in Health Care Delivery and Financing

Public and private purchasers' efforts to constrain spending are profoundly affecting the nation's health care system. Resistance to premium rate increases by employers has stimulated intense competition among insurers and providers. Each group is struggling to maintain its financial position given a limited sum of health care dollars. Managed care plans have been an important force in this changing health care environment. In these plans, insurers play an active role in the health care delivery process. At the same time, managed care payment methods force providers to assume some of the financial risk of delivering services. These developments have blurred the distinctions between insurance and delivery functions.

Historically, the predominant form of insurance for both public and private payers has been indemnity coverage. Under traditional indemnity insurance, hospitals and physicians are reimbursed on a fee-for-service basis, that is, they are paid a specified amount for each unit of service. Other than patient cost sharing and some coverage limitations, there are few financial constraints on the frequency, duration, and intensity of services.

The traditional system has allowed providers to furnish most services they believe necessary or desirable. Private indemnity insurers and governmental entities pay the consequent costs or charges, and purchasers bear the higher premiums. This infusion of funds into the health care system has contributed to rising expenditures and excess service capacity. At the same time, these funds have helped finance technological advances, and enabled hospitals and other providers to subsidize uncompensated care and costs associated with graduate medical education and research.

As employers and other purchasers have tried to control their outlays for health care, they have turned increasingly to health plans that offer comparable or more generous benefit packages at prices generally lower than those of the traditional indemnity product.[1] Like indemnity insurers, these plans accept a prepaid premium and assume the financial risk of providing a defined set of benefits for each person. Unlike traditional indemnity insurers, though, they attempt to constrain spending by playing an active role in the organization and delivery of services.

Public payers also have been working to curb the growth in health care spending. In the 1980s and early 1990s, Medicare reformed its payment methods by introducing the prospective payment system (PPS) for inpatient hospital care and the resource-based relative value scale (RBRVS) for physician services. These systems permit Medicare to control the price of each unit of service. Medicare spending has continued to grow, however, due to increases in volume, especially for outpatient and post-acute care services. While substantial shares of the privately insured and Medicaid populations are enrolled in some type of managed care plan, comparable enrollment among Medicare beneficiaries has lagged behind. One of the reasons is that, unlike many other payers, Medicare continues to offer fee-for-service coverage as its basic option.

In view of the spending restraints imposed by health care payers, the structure of the delivery system increasingly will be determined by the entities that control the distribution of health care premium dollars.

This chapter describes recent changes in the organization and financing of health care. It begins by discussing structural changes occurring in response to the incentives inherent in managed care payment systems. The next section focuses on the financing of health care, highlighting methods that employers, Medicare, and Medicaid are pursuing to rein in their spending. The roles of individually

purchased insurance and the uninsured in the overall financing picture are also described. The final section discusses how changes in the financing and organizational structures of health care delivery may affect access and quality.

STRUCTURAL CHANGES IN THE HEALTH CARE SYSTEM

As health insurance purchasers resist premium rate increases, the challenge for insurers and health care providers is to deliver a quality product within a constrained budget. The decisions they make will affect both the number and intensity of services that are furnished. With a declining number of people covered by indemnity insurance, the financing, organization, and delivery of health care increasingly will be influenced by managed care plans. These plans use a variety of techniques to constrain their outlays for health care services. One is negotiating favorable payment rates from providers in exchange for a defined patient base. Many plans also incorporate incentives for practitioners to furnish care efficiently by shifting the financial consequences of medical decision making to them through payment methods such as capitation.

These strategies are leading to a more price-sensitive health care system. Under traditional indemnity insurance, providers have competed for patients based on the perceived quality of their products, rather than on price. To maintain their financial position in a managed care environment, providers increasingly must find ways to control their costs, develop alternative revenue streams, and broaden their market share while continuing to furnish quality care. Many providers are allying to deliver care more efficiently and strengthen their negotiating position with managed care plans.

The following discussion describes these changes in the delivery system, focusing on the roles of and relationships among managed care plans, hospitals, and physicians.

Managed Care Plans

The most common managed care models are health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point-of-service (POS) plans. In a traditional HMO plan, subscribers must receive their care from a limited group of providers. PPO and POS subscribers may not be subject to the same level of plan oversight as in HMOs: Generally they may go to any provider, but their out-of-pocket payments are lower if they choose participating providers that give the insurer discounted rates.

The number of people enrolled in managed care plans represents a significant share of the insured population. In 1995, 69 percent of employees in firms with 200 or more workers were in either an HMO (29 percent) or a PPO or POS plan (40 percent).[2] Managed care penetration varied significantly across the country. The greatest penetration was in the West, where 89 percent of insured workers were enrolled in one of these options. The Midwest followed with 73 percent participation. The Northeast and South had managed care enrollments of 69 percent and 63 percent, respectively.[3]

Managed care plans use a variety of techniques to control their costs. First, they actively seek providers with lower-cost practice patterns and offer them a defined patient base in exchange for favorable payment rates. By limiting the number of providers or by creating strong financial incentives to choose certain ones, managed care plans influence which providers subscribers will use. Through this selective contracting, managed care plans can substantially affect providers' revenues. Plans' bargaining positions are strongest in areas with excess provider capacity. Providers that choose not to participate or that are not selected by the managed care plan may experience a decline in their patient volume.

In addition, managed care plans often use discounted fee-for-service rates to control their costs. They also use per case, per day, or per person payments to shift some of the financial risk of treating patients to providers. Per case or per day payments are generally made to hospitals, whereas per person payments are more often made to physicians, predominately primary care practitioners.[4] These payment methods reward providers for delivering care efficiently, discouraging unnecessary service use.

A per person, or capitation, payment system is the most comprehensive way to shift financial risk to providers. Under capitation, providers receive a prepaid sum to furnish a defined set of services to a

plan's enrollees. This creates a monetary incentive for physicians to limit patients' use of services (or encourage preventive services) because the physician receives the same payment regardless of the volume or intensity of care, or even if no care is provided at all. Many managed care plans also require primary care physicians to act as "gatekeepers" to specialty care or hospital services. Under these arrangements, the primary care physician must preauthorize any services a patient receives. While these physicians usually do not bear the full financial risk for the additional services, delegating the gatekeeping function enables managed care plans to use financial incentives to limit referrals.

One way managed care plans—most commonly HMOs—use payments to transfer risk is by creating health sector funds and risk pools. This links payments to providers in one sector to the expenditures for services delivered by providers in other sectors. An HMO may allocate premiums into separate primary care, specialty care, and hospital funds. The HMO withholds a portion of the primary care fund to establish risk pools for hospital and specialist services. The rest of this fund is used to pay primary care physicians a fee for each subscriber assigned to them. The primary care physicians bear the costs of their services if they exceed their per capita payments. In addition, if at year-end the HMO has spent less than the allocated amount for, say, hospital services, the primary care physicians share the money accumulated in the hospital risk pool. Conversely, if the HMO's payments for hospital services exceed the hospital fund, the HMO retains the hospital risk pool monies to help compensate for this deficit. Under this arrangement, primary care physicians have a financial incentive to manage the use of hospital services. Similar risk pools can be created to provide incentives for specialists and hospitals to constrain service delivery.

Hospitals and physicians thus are connected in a way they never have been before. This interdependence is forging relationships between and among providers, changing the way they do business.

Hospitals

The hospital industry is operating in an increasingly price-competitive environment. Payment rates from private payers are declining relative to the costs of treating the patients they sponsor. (See Chapter 1.) The ability of hospitals to obtain surplus revenues from private payers likely will continue to diminish as hospitals treat a growing number of managed care enrollees. In 1994, 68.3 percent of hospitals had at least one contract with an HMO or a PPO, up from 57.0 percent in 1990 (see Table 2-1).

Managed care organizations are in a strong position to promote price competition among hospitals because the supply of inpatient beds far exceeds the demand. Owing to technological advances and medical practice pattern changes, many services that previously were furnished on an inpatient basis are now delivered in ambulatory and post-acute care settings or at home. The average occupancy rate for hospitals in 1995 was 60 percent, which means that two-fifths of hospital beds were empty.

The incentives under managed care appear to be reducing inpatient hospital utilization even further. Both the frequency of hospital admissions and the average length of stay are lower for HMO enrollees compared with all people under 65, the group most comparable to the general HMO population.[5] In 1992, there were 72 hospital discharges per 1,000 HMO subscribers, which was 21 percent lower than the 91 discharges per 1,000 persons under 65. The average length of stay for HMO enrollees was 4.6 days compared with 5 days. Overall in 1992, HMO enrollees used about 362 days of hospital care per 1,000 subscribers, compared with 457 days per 1,000 persons under 65.

In recent years, declining inpatient use has not resulted in any appreciable number of hospital closings. In 1994, 16 acute care hospitals closed, the fewest at least since 1987 (see Figure 2-1).[6] The financial environment has stimulated management and structural changes, however, that have reduced hospital capacity. The total number of hospital beds has fallen steadily since 1983, from slightly more than a million to 874,000 in 1995.[7] Through mergers and buyouts there has been considerable consolidation in the hospital industry, so that fewer hospitals are independently operated.

Confronted with an increasingly price-competitive environment, hospitals are striving to maintain their financial position by pursuing one or more of the following strategies: controlling their costs, seeking alternative revenue streams, or expanding

Table 2-1. Hospitals With Health Maintenance Organization and Preferred Provider Organization Contracts, by Hospital Category, Selected Years (In Percent)

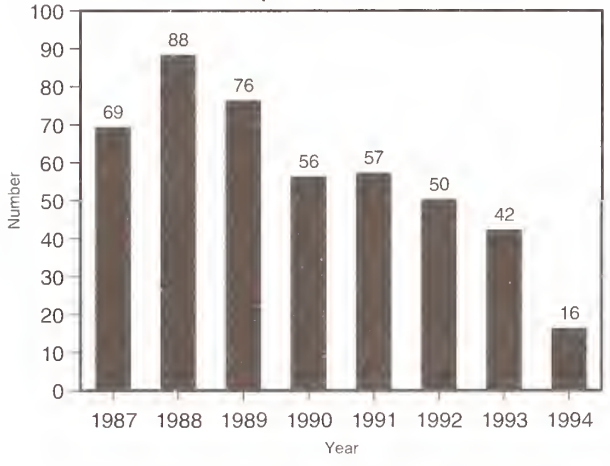
Hospital Category	Any HMO			Any PPO			HMO or PPO		
	1990	1993	1994	1990	1993	1994	1990	1993	1994
All hospitals	43.6%	50.4%	56.5%	48.3%	60.8%	67.9%	57.0%	66.7%	68.3%
Community hospitals	48.1	55.2	61.7	52.9	66.3	74.0	62.5	73.1	74.6
New England	70.3	74.6	80.1	46.4	62.3	71.1	71.6	76.8	81.1
Middle Atlantic	56.9	71.4	81.7	37.2	57.7	71.2	64.8	77.9	85.9
South Atlantic	42.0	49.1	55.2	56.7	72.3	74.4	60.1	74.9	72.9
East North Central	67.9	71.9	61.7	72.0	80.0	72.6	82.2	85.9	72.3
East South Central	30.0	40.4	59.4	56.9	67.9	80.3	60.1	71.0	71.8
West North Central	37.3	38.9	42.9	34.2	51.6	64.8	45.9	58.4	65.4
West South Central	30.5	40.0	53.1	44.9	66.5	80.5	48.5	67.9	77.4
Mountain	39.9	46.5	56.4	45.4	52.6	63.5	48.5	56.4	63.1
Pacific	66.9	74.3	83.1	74.7	77.6	86.2	81.9	84.0	85.1
Voluntary	57.3	63.4	66.4	56.9	70.0	74.6	69.0	77.9	76.6
Proprietary	46.2	62.7	69.5	62.9	77.9	83.9	67.5	81.2	80.1
Government	28.0	32.9	46.2	39.0	53.7	68.1	45.4	58.4	67.4

Note: Trends in responses may reflect, in part, hospitals' increasing familiarity with HMO and PPO contracting over time; this may have increased the likelihood of positive survey responses. HMO = health maintenance organization. PPO = preferred provider organization.

SOURCE: American Hospital Association Annual Survey of Hospitals.

their market share. As a group, they have achieved considerable success in constraining their costs. Between 1983 and 1992, hospital costs per case grew about 4.4 percent annually, after accounting for inflation. By 1993, real growth had slowed to 2.8 percent, and in 1994 costs per case actually declined by 1.0 percent relative to inflation. Hospitals have achieved these lower growth rates largely by reducing intensity of care and the number of hospital personnel. (See Chapter 3.)

Figure 2-1. Number of General Acute Care Hospital Closures, 1987-1994



Note: Closures are counted when hospitals stop providing general, short-term, acute inpatient services. If a hospital merges or is sold to another hospital, but the physical plant continues to provide inpatient acute care, it is not counted as a closure.

SOURCE: Department of Health and Human Services, Office of the Inspector General, *Hospital Closure: 1994*, February 1996.

Hospitals are seeking alternative revenue streams by broadening the scope of services they offer and competing for patients with other types of providers. In 1985, about half the hospitals in the United States reported having an organized outpatient department, and outpatient services accounted for only 16.1 percent of all hospital revenue. By 1995, almost all hospitals had this capacity, and outpatient services represented 28.8 percent of total hospital revenue.[8]

Similarly, a growing number of hospitals are venturing into the post-acute care market, where payments are still dominated by fee-for-service methods. Hospitals are developing skilled nursing facilities (SNFs) or are using acute care beds as swing beds to provide skilled nursing services. In addition, they are establishing their own rehabilitation units and home health agencies. Converting unused acute care capacity into SNF or rehabilitation beds can increase overall efficiencies, market share, revenues, and profitability. In 1995, 62 percent of hospitals operated a skilled nursing unit or

had swing beds, compared with 46 percent in 1991 (see Table 2-2). The share of hospitals that owned a home health agency rose from 29 percent to 46 percent over the same period.

Along with controlling their costs and seeking alternative revenue sources, hospitals are attempting to broaden (or maintain) their market share by securing a patient base through arrangements with other providers or managed care plans. Such arrangements have the potential to make overall service delivery more efficient and provide patients with a continuum of care. In 1994, for instance, 21 percent of community hospitals participated in health networks—groups of hospitals, physicians, other providers, insurers, or community agencies that coordinate and deliver a broad spectrum of services.[9] Anecdotal evidence suggests that most hospitals have some type of arrangement, such as joint ventures or informal alliances, with other providers.

Entering into arrangements with physicians is an increasingly popular strategy for hospitals. Such relationships can bolster a hospital's ability to secure managed care contracts, thereby increasing market share and improving financial performance. Even less formal relationships with physicians may be financially advantageous for hospitals. Certain initiatives involving physicians in hospital decision-making processes are associated with improved financial performance, according to a recent study conducted for the Prospective Payment Assessment Commission (ProPAC).[10] Among these are holding department heads accountable for profits and losses and including medical staff as voting members of the hospital's board.

Hospitals and physicians can integrate their services in myriad ways. While some hospitals purchase physician practices and employ those physicians, a more common practice is for hospitals and physicians to form a distinct corporate entity. A physician-hospital organization (PHO) is one model. These entities can foster collaboration and coordinate care across settings. Perhaps most importantly, they can be used as vehicles to negotiate contracts with managed care plans. Through this approach, hospitals and physicians can collectively manage the provision of both inpatient and ambulatory services. As a consequence, they are able to control the distribution of a larger share of the premium dollar rather than having these decisions determined by the managed care plan. While this arrangement subjects both hospitals and physicians to more financial risk, it also creates an opportunity for greater profits. In some areas, PHOs are bypassing the managed care plan entirely and negotiating directly with employers to provide the full complement of health care services.

Table 2-2. Short-Term Hospitals With Post-Acute Care Providers, Selected Years (In Percent)

Provider Type	1991	1993	1995
Skilled nursing unit*	45.7%	53.4%	61.9%
Home health agency	29.3	37.5	46.2
Rehabilitation unit	12.8	14.9	15.8

* Includes hospitals with swing beds.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of Survey and Certification.

The long-term effects of the changing environment on hospitals are still unclear. Technological advances and constraints on acute inpatient hospital care may continue to add to the excess capacity for hospital services. If financial pressures persist, there will be more competition on the basis of price. To protect or enhance their competitive position, hospitals may be reluctant to invest in new technologies, unless doing so would attract payers or result in lower costs. As payers seek lower-priced inpatient providers, hospitals will feel greater pressure to limit the amount of uncompensated care they provide. Teaching facilities that incur higher costs because they train medical residents or conduct research may also be at a competitive disadvantage.

Hospitals traditionally have been viewed as the hub of the health care system and often have the capital reserves necessary to finance collaborations with other providers. Those that aggressively pursue such arrangements not only can improve their chances of being the hospital of choice for inpatient services, but also can exert more influence over medical practice decisions. In areas where managed care systems exert more control, however, hospitals may be viewed as cost centers with little input into delivery decisions.

Physicians

Historically, physicians determined not only which services would be provided, but where those

services would be delivered. These decisions generally were made with little accountability for costs. Managed care is changing this. Consequently, physicians are reassessing their practice patterns and their role in the health care system. Because managed care plans contract only with selected physicians, these providers' patterns of care—and the costs of that care—are under greater scrutiny than ever before. As previously discussed, HMOs increasingly are holding physicians, especially those in primary care, partially or wholly at risk for the costs of services furnished by health care providers in other sectors.

One indication of the level of financial pressure physicians are facing is the trend in physician income. The annual growth in median net medical practice income fell from 8 percent in 1992 to 4 percent in 1993.[11] In 1994, income dropped by 3.8 percent, the first decrease since the beginning of data collection in 1968.

Some physicians are responding to the intensified pressures by selling their practices to hospitals or managed care organizations and becoming employees of those entities. In 1990, nearly 70 percent of physicians reported they were self-employed. By 1995, this share had dropped to 55 percent. Over the same period, the number of physicians who were employees rose from 25 percent to 39 percent.[12] Others are allying with other types of providers or with fellow physicians.

Physicians are finding their ability to contract with managed care plans is enhanced when they combine into larger organizations. Joint hospital-physician arrangements are desirable to many physicians because hospitals generally are in a better financial position to furnish necessary capital, facilities, technology, staff, and administrative support. In addition, physicians' market power may be stronger if they affiliate with a hospital that already has a strong foothold in the marketplace. A number of physicians, however, are choosing to position themselves in the market by forming alliances with other physicians rather than by allying with hospitals.

Physicians who integrate their practices with each other supply the necessary start-up capital or secure an outside investor to provide these funds. Depending on their size, physician groups may be in a strong negotiating position with managed care plans. In some areas, such groups are taking on more risk by agreeing to be financially responsible for the provision of hospital services in exchange for a larger share of the managed care premium. In these situations, the hospital must contract with the physician group rather than with the managed care entity.

Because physicians generate the demand for hospital services, they have leverage to assume a leadership role in arrangements with other providers. As health care funds become more and more limited, physicians—especially those who deliver primary care services—have an opportunity to play a larger part in deciding how those dollars will be distributed.

THE CHANGING HEALTH CARE FINANCING ENVIRONMENT

The proliferation of insurance products and restructuring of the organization and delivery of care reflect substantial changes in the behavior of major purchasers. During the 1980s and early 1990s, rising health care outlays continued to increase the financial burden on private and public purchasers. In response, major employers, along with Medicare and Medicaid, began to seek ways to reduce their costs.

Over the course of the last decade, their actions have resulted in a shift in the flow of dollars away from traditional indemnity insurance and toward managed care plans. This shift in financing did not happen all at once, and it is still going on. But it has—at least in the short run—fundamentally altered the financial incentives faced by insurers, providers, and patients. In this environment, some providers have succeeded in reducing cost growth to unprecedented low levels.

Employers' purchasing decisions have played a powerful role in changing the financing of health care, and employers already have reaped some of the benefits. Medicare—although controlling its provider payment rates through initiatives like PPS and RBRVS—has had only limited success in controlling overall spending. Despite the long-standing availability of a managed care option, Medicare has not yet moved as far in this direction as the private sector. This is because HMO enrollment by program beneficiaries is voluntary,

and the number and types of available options are limited. In addition, small employers and people who purchase insurance on an individual basis, as well as the uninsured, generally are less able than large group purchasers to exert financial pressure on insurers. Consequently, their ability to participate in (and benefit from) these changes is much less certain.

This section describes recent changes in health care financing undertaken by purchasers in the major categories: employers, Medicare, Medicaid, and individuals. Characteristics of the uninsured are also discussed to complete this picture.

Employers

Most people obtain their health insurance coverage through employer-sponsored group health insurance plans.[13] In 1994, more than 60 percent of the noninstitutionalized population under 65 had coverage either as an employee or as a covered dependent of an insured worker.[14] Changes in employers' health benefits policies thus have tremendous potential to affect the behavior of insurers, health care providers, and patients.

Like other purchasers, employers have faced rapid growth in the cost of health insurance benefits, especially in the late 1980s and early 1990s. Between 1987 and 1992, average health benefit costs per worker increased more than 10 percent annually.[15] By 1995, employers' share of these costs had reached 6.6 percent of total employee compensation, representing 23 percent of employers' total expenses for all employee benefits.[16]

Employers have responded by attempting to reduce the cost of employee health benefits. Changes in employers' benefits policies and buying practices have occurred relatively slowly because, like other purchasers, they are struggling to find effective methods to control health care use and costs while maintaining workers' access to necessary care. Moreover, while some employers have aggressively sought new methods to limit costs, others have been relatively passive.

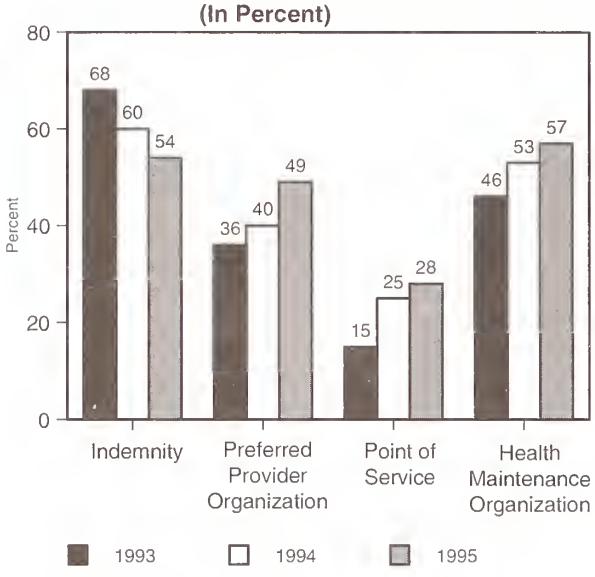
Because traditional indemnity insurance was still the predominant type of employer-sponsored health plan in the 1980s, many employers' initial responses were limited to adopting compatible cost-containment methods. These included shifting some of the cost to employees and attempting to limit service use, without restricting employees' choices among providers or altering traditional fee-for-service payment methods. By the late 1980s and early 1990s, premium contributions were required of most employees, especially for family coverage. In addition, many businesses had imposed (or raised) deductibles and coinsurance payments to counteract employees' financial incentives to use services. Most also adopted a variety of utilization management techniques designed to avoid unnecessary care, including preadmission certification and concurrent review for inpatient care, precertification for outpatient surgical procedures, and case management for high-cost cases. Many large employers also chose to self-insure under the Employee Retirement Income Security Act of 1974, thereby avoiding state benefit mandates and premium taxes while reducing or eliminating the payment of premiums to insurers.

As HMOs and PPOs became more widely available, many firms started to offer their employees a choice between indemnity insurance and one or more of these alternatives. In 1988, almost 90 percent of employers with 200 or more employees still offered an indemnity plan, but 70 percent also offered an HMO and 12 percent offered a PPO.[17] Some businesses, especially small ones, continued to offer only one plan, usually indemnity insurance.

The mix of plans offered has changed rapidly during the 1990s as employers have continued to seek lower premiums from insurers. By 1995, only 54 percent of large employers (those with more than 500 employees) offered a traditional indemnity plan (see Figure 2-2). Meanwhile, an increasing percentage of large companies offered a PPO, POS, or HMO plan.

While firms may change the mix of plans they offer, shifts in the flow of funds between indemnity insurance and managed care alternatives are driven largely by changes in the proportion of employees enrolled in each type of plan. Since 1993, the proportion of large companies' employees enrolled in indemnity plans has decreased from 43 percent to 27 percent (see Figure 2-3). Enrollment shares for the various types of managed care plans have increased each year, except for POS plans, which fell slightly between 1994 and 1995. Taking into account

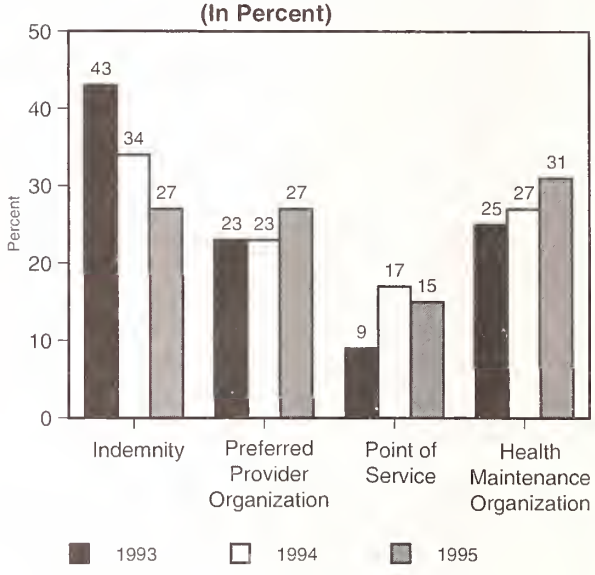
Figure 2-2. Large Firms Offering Selected Health Plans, 1993-1995 (In Percent)



Note: Large firms are those with 500 or more employees.

SOURCE: Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995.*

Figure 2-3. Large Firms' Employees in Selected Health Plans, 1993-1995 (In Percent)



Note: Large firms are those with 500 or more employees.

SOURCE: Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995.*

premium contributions and likely out-of-pocket expenses, PPOs often provide a comparable benefit package at lower cost than indemnity plans. HMOs generally offer a richer benefit package at similar cost.

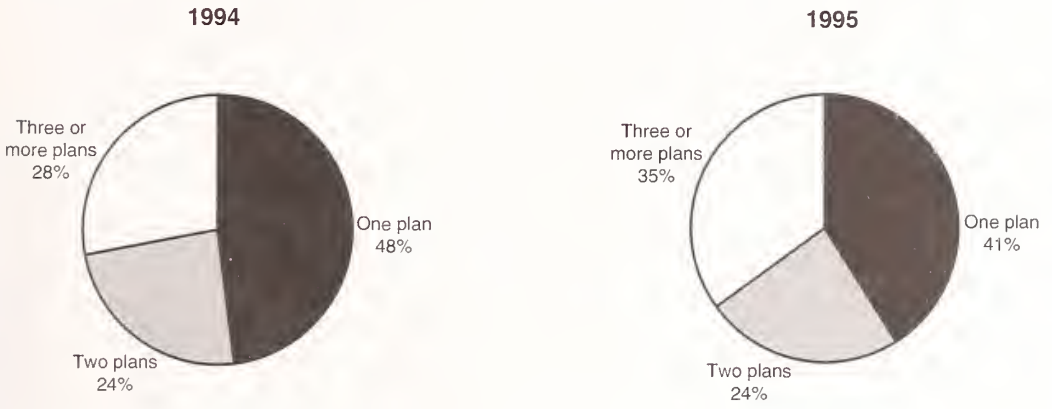
Employers also are offering their workers a greater choice of plans (see Figure 2-4). Most large businesses now offer at least two plans and many, three or more. Firms with 200 or more employees offering only one plan declined from 48 percent in 1994 to 41 percent in 1995. This probably reflects changes in employer attitudes about the potential benefits of employee choice, along with the proliferation of managed care alternatives in most regions of the nation.

Many believe that offering employees choices among plans will generate additional pressure on insurers to hold costs down. To be effective, however, this strategy must give employees financial incentives to select the most economical plans. To that end, employers seem to be negotiating changes in the deductible and copayment provisions of PPO and POS plans to strengthen the financial incentives for enrollees to use in-network providers. This should help these plans reduce their costs, thereby encouraging further shifts in enrollment. However, employee premium contributions and the basis on which they are set vary widely among plans, industries, and regions. Thus, many businesses may not yet be providing the financial incentives needed to gain the full benefit of a consumer choice approach to cost containment.

The same shifts away from traditional indemnity insurance and toward managed care plans are also occurring, though less rapidly, among small private business establishments (those with fewer than 100 workers).[18] Between 1992 and 1994, the proportion of covered workers enrolled in indemnity plans fell from 68 percent to 55 percent. Meanwhile, the share enrolled in PPO plans increased from 18 percent to 24 percent and the share in HMO plans rose from 14 percent to 19 percent.

Small employers are much less likely than large ones to offer health insurance coverage to their employees. A 1993 Robert Wood Johnson Foundation survey of small private businesses in 10 states found that only about a third of firms with fewer than five employees offer coverage.[19] This percentage rises rapidly with firm size. While 93 percent of businesses with 50 or more workers offer health insurance, only about half those with five to nine workers do. Of firms that do not, 80 percent have fewer than 10 workers; these companies account

Figure 2-4. Firms Offering Choice of Plans, 1994 and 1995 (In Percent)



Note: These firms had 200 or more employees.

SOURCE: KPMG Peat Marwick LLP, *Health Benefits in 1995.*

for about 50 percent of all employees who are not offered employer-based coverage.[20]

When small employers do offer health benefits, they often get less coverage for their premium dollars than larger ones. Although premiums do not differ markedly from those paid by large firms, the small employers' plans tend to cover fewer services. Small establishments are also less likely than large ones to give their employees a choice of plans.

Businesses that do not offer health insurance benefits share several characteristics. In every category of firm size, they have substantially lower payroll expenses per worker than companies that do.[21] They also have a much higher proportion of part-time and temporary workers.

More firms of all types are joining employer coalitions to gain leverage in negotiations with insurers and providers of care.[22] In 1995, more than 100 coalitions were active nationwide. Coalitions are especially attractive to small and large firms alike that have employees dispersed in widely scattered locations. Some coalitions have successfully negotiated reductions in health plans' premiums. Others have focused more on collaboration with providers to develop methods for measuring and improving the quality and effectiveness of care. As these kinds of efforts mature, coalitions may become powerful forces influencing the flow of funds among plans as well as the organization and delivery of care.

Medicare

The Medicare program provides health insurance coverage for the elderly and certain disabled populations, enrolling some 37.3 million people in 1995.[23] Almost 89 percent are eligible because of age; they represent about 96.5 percent of the total elderly population. Total Medicare program payments in 1995 were estimated at $183.8 billion. (See Appendix A.)

Traditionally, Medicare has paid for services for its beneficiaries on a fee-for-service basis. A growing number of beneficiaries, however, are opting to enroll in managed care plans. Most of those who choose this option select risk plans, operated by HMOs that are paid a capitation rate to cover all Medicare services. As of April 1996, 3.5 million beneficiaries (9.1 percent of the total Medicare population) had joined risk plans (see Table 2-3). Enrollment has grown, on average, by 19.5 percent annually since 1990, while the number of risk plan contracts has more than doubled. Medicare program payments to risk plans totaled $14 billion in fiscal year 1995.

Beneficiaries can also enroll in health care prepayment plans to which a capitation payment is made for certain ambulatory services, or in cost-based contracting plans, which are paid based on the cost of providing all Medicare benefits. To test other managed care options, Medicare is also conducting a number of demonstration programs. About 16.5 percent of Medicare managed care

Table 2-3. Medicare Risk Plan Participation, 1990-1996

Year	Enrollees: Number (In Millions)	Enrollees: As a Percentage of Total Medicare Enrollment	Number of Contracts
1990	1.2	3.5%	95
1991	1.3	3.7	85
1992	1.5	4.2	83
1993	1.7	4.7	90
1994	2.1	5.7	109
1995	2.9	7.7	154
1996*	3.5	9.1	202

Note: Enrollment data are as of September each year; contract data are as of January each year.

* Data are as of April 1996.

SOURCE: Health Care Financing Administration, Office of the Actuary and Office of Managed Care.

enrollees (1.8 percent of all beneficiaries) had chosen these options as of April 1996.

Despite the growth in Medicare managed care plans, the vast majority of beneficiaries continue to participate in the fee-for-service program. This contrasts sharply with patterns of enrollment among the non-Medicare population for several reasons. First, fewer managed care plans are available for the Medicare population than for the under-65 nondisabled population, so opportunities for enrollment are more limited. Second, because the elderly and disabled face a higher risk of illness, they may prefer to remain in the fee-for-service program to take advantage of the ability to visit any provider or to maintain relationships with current providers. Third, beneficiaries simply may be unfamiliar with managed care and thus reluctant to try it.

Finally, the growing use of managed care among other populations has been driven by employers and state Medicaid programs. Often, Medicaid-eligible persons or those seeking insurance through their employer do not have the option of remaining in fee-for-service plans; if they are able to choose fee-for-service coverage, it may be considerably more expensive. Medicare beneficiaries, by comparison, do not have the same incentives to join managed care plans.

Medicare Managed Care Payments, Benefits, and Service Use—Under a risk contract, Medicare pays an HMO a capitation amount for each beneficiary. This amount is adjusted to reflect differences in expected levels of spending (by age, sex, Medicaid status, institutionalization status, and whether the beneficiary has employer-based coverage). The base rate equals 95 percent of the projected average fee-for-service Medicare program payments (the adjusted average per capita cost, or AAPCC) in a plan's service area. Plans are financially at risk for all covered services used by beneficiaries.

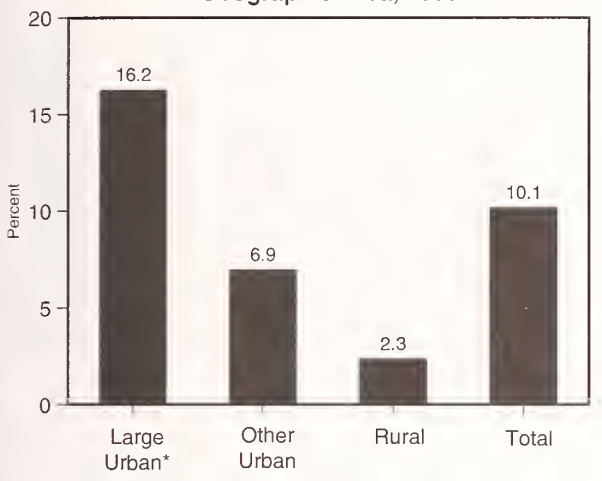
A participating plan must annually submit an adjusted community rate proposal to Medicare. The proposal includes the plan's expected cost of providing Medicare-covered benefits, based on costs for its commercial enrollees adjusted for the higher usage rates of an older population. If this cost is lower than the expected Medicare payment, the plan must return the excess to Medicare, credit it to future years, or use it to provide extra benefits through additional services or lower cost-sharing requirements. Since most choose the latter, benefit packages vary from plan to plan.

Medicare risk plan enrollees use a different mix of services than those in the fee-for-service program. For example, a 1992 evaluation found that although beneficiaries in risk plans were just as likely to be admitted to the hospital as their fee-for-service counterparts, they had shorter lengths of stay.[24] At the same time, HMO enrollees were more likely to be admitted to skilled nursing facilities, although their length of stay in those facilities was similar to that of fee-for-service beneficiaries.

This service use pattern may reflect differences in health status of the managed care population. Or, it may be because the plans have greater flexibility in making service decisions than do providers in the fee-for-service program. Beneficiaries enrolled in an HMO, for example, may go directly into a nursing facility without a prior hospital stay and still receive coverage, unlike beneficiaries with fee-for-service Medicare coverage. In addition, with a capitation payment, plans have an incentive to manage and direct service use to control costs and improve efficiency.

Enrollment in Medicare Managed Care—Nationwide, slightly more than 10 percent of beneficiaries were enrolled in risk plans or one of the

Figure 2-5. Medicare Managed Care Enrollment as a Percentage of Total Enrollment, by Type of Geographic Area, 1995



* Metropolitan statistical areas with a million or more people.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of Managed Care.

Table 2-4. Urban Areas With the Highest Share of Medicare Managed Care Enrollment, 1995

Geographic Area	Enrollment Share
Large urban:	
Riverside-San Bernardino, Calif.	51.1%
Portland, Ore.	48.9
San Diego, Calif.	46.2
Orange County, Calif.	40.6
Oakland, Calif.	39.3
Average	16.2
Other urban:	
Tucson, Ariz.	41.6
Salem, Ore.	40.5
Ventura, Calif.	36.8
Eugene-Springfield, Ore.	36.8
Vallejo-Fairfield-Napa, Calif.	35.0
Average	6.9

Note: Data are as of November 1995.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of Managed Care.

other Medicare managed care options in late 1995. The proportion varied significantly across and within geographic areas (see Figure 2-5). For example, in large urban areas (with populations of one million or more), more than 16 percent of beneficiaries were enrolled in managed care plans; in other urban areas, almost 7 percent of enrollees participated. The lowest managed care enrollment rates were in rural areas, where about 2 percent of beneficiaries belonged to managed care plans. Within geographic areas, variation in the proportion of beneficiaries enrolled in managed care was even more striking: There were four large urban areas and two other urban areas in which more than 40 percent of Medicare beneficiaries were enrolled (see Table 2-4).

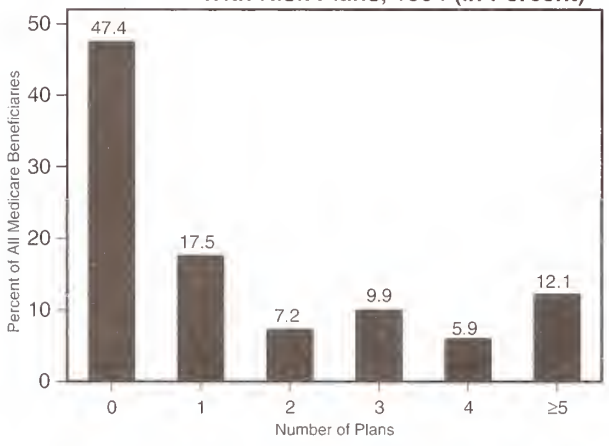
Medicare enrollment in managed care is highly concentrated. In 1995, almost 74 percent of managed care enrollees lived in large urban areas, even though these areas were home to only 46 percent of the total Medicare population. In fact, five large urban areas alone accounted for almost 25 percent of all beneficiaries in managed care plans. In rural areas, 13 counties contained a quarter of all rural Medicare managed care participants, whereas 2,000 rural counties had fewer than 100 beneficiaries in managed care.

Most of the growth in managed care has occurred in urban locales where Medicare managed care was already well-established. In fact, almost half the enrollment growth between 1992 and 1995 can be attributed to increases in large urban areas that already had above-average enrollment in 1992. In rural areas and in urban areas with relatively low Medicare managed care enrollment, participation grew much more slowly.

Plan Participation—The geographic variation in managed care enrollment is primarily attributable to large differences in HMO participation in the risk program across the country. In 1994, beneficiaries' access to capitation plans differed greatly between urban and rural areas. Three-quarters of all beneficiaries living in urban areas had access to a least one risk plan, and almost half had access to three or more plans. By contrast, less than 1 percent of rural beneficiaries had access to as many as three plans, while 85 percent lived in counties where there were no risk plans. Overall, nearly 48 percent of Medicare beneficiaries lived in counties without a Medicare risk plan, while about 12 percent had access to five or more plans (see Figure 2-6).

The geographic distribution of Medicare risk contracts primarily reflects the location of the

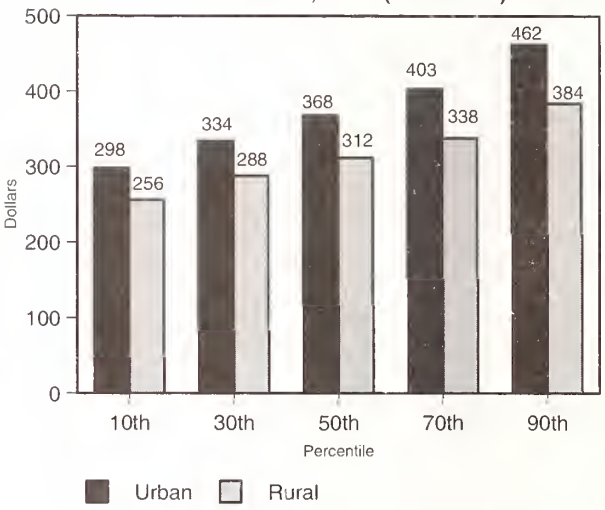
Figure 2-6. Medicare Beneficiaries in Counties With Risk Plans, 1994 (In Percent)



Note: Contract data are as of May 1994.

SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of Managed Care.

Figure 2-7. Adjusted Average Per Capita Costs in Urban and Rural Counties, 1995 (In Dollars)



SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of Managed Care.

HMOs that offer them. A disproportionate number of the nation's commercial HMOs serve Arizona, California, Florida, Illinois, New York, Ohio, Texas, and Wisconsin, each of which had at least 20 HMOs in 1995. Largely rural states like Idaho, Mississippi, Montana, North and South Dakota, and Vermont had only one or two HMOs, and Alaska and Wyoming had none.[25] Commercial HMOs' service areas also covered a larger proportion of urban counties (96 percent) than rural ones (79 percent).

Commercial HMOs differ in their willingness to participate in the Medicare risk program. Of the 591 HMOs operating in 1995, only 123 (20.8 percent) offered one or more Medicare risk plans. The proportion of HMOs participating in the risk program varied substantially across the country: 52 percent of commercial HMOs in the Pacific region offered at least one Medicare risk plan compared with only 11 percent in the East North Central region.[26]

HMO participation in the Medicare risk program is related to Medicare's capitation payment rates. In 1995, AAPCCs varied widely among urban and rural counties nationwide, partly because of differences in local wages and other input prices (see Figure 2-7). Even after standardizing AAPCCs to control for these inputs, however, substantial variation remained.[27] This variation was due to differences in utilization and provider payment rates in Medicare's fee-for-service program. Areas where fee-for-service beneficiaries use a more intensive mix of services or are treated in teaching hospitals, for example, have higher-than-average standardized AAPCCs.

Because HMOs influence the mix and volume of services and negotiate price discounts from providers, standardized AAPCC rates are a useful measure of the relative attractiveness of Medicare's payment rates to HMOs. In areas where these rates are higher, it might be easier for HMOs to provide covered services at costs below their payments. A preliminary ProPAC analysis suggests that in 1995 HMO participation in the risk program was greater in counties with higher standardized AAPCCs. Of urban counties with standardized AAPCCs above the 90th percentile, 68 percent were served by at least one risk plan. By contrast, only 44 percent of urban counties with AAPCCs below the 10th percentile had one or more plans. That almost a third of the urban counties with the highest standardized payment rates had no Medicare risk plans, however, suggests other factors also play an important role in HMOs' decisions to participate in Medicare.

The potential size of the risk plan market—as indicated by the number of Medicare beneficiaries residing in the county—appeared to influence HMO participation. Nonetheless, there were a number of exceptions. While HMOs tended to offer

Table 2-5. First-Time Risk Plan Enrollees' Length of Enrollment, 1990-1994 (In Percent)

Year of Enrollment	Enrollment Length (In Months)					
	< 3	3-6	6-9	9-12	12-24	24+
1990	7.3%	4.5%	3.6%	3.3%	10.5%	70.9%
1991	7.0	4.3	3.3	3.3	12.2	70.0
1992	6.2	4.5	3.4	3.4	10.2	72.4
1993	6.0	4.5	3.3	3.2	—	—
1994	5.8	4.2	3.5	—	—	—

SOURCE: ProPAC analysis of Group Health Plan Master File data from the Health Care Financing Administration.

a risk plan in counties where the standardized AAPCC was high and the population of beneficiaries was large, some areas with both characteristics (for example, New Orleans, Philadelphia, and New York City) had many HMOs but few risk plans. At the same time, some areas with low standardized AAPCCs (Portland, San Francisco, and San Jose) had high HMO participation rates in Medicare. These findings suggest that market circumstances and the individual characteristics of HMOs probably are important as well.

Beneficiary Satisfaction With Medicare Managed Care Plans—Medicare rules allow beneficiaries to disenroll from a risk plan with a month's notice. One advantage of this policy is that beneficiaries who otherwise would be reluctant to try HMOs know they can easily leave if a plan does not meet their expectations. The pattern of disenrollment among beneficiaries thus provides some evidence of beneficiary satisfaction with managed care.

ProPAC analysis shows that of beneficiaries who enrolled in risk plans for the first time in 1994, 5.8 percent disenrolled within three months (see Table 2-5). Other research has focused on these early disenrollees, since it is believed that high early disenrollment rates reflect beneficiaries' lack of familiarity with the HMO concept.[28] This probably is the case, as these early disenrollees were more likely to return to fee-for-service Medicare, while beneficiaries who disenrolled after three months were more prone to join other risk plans (see Table 2-6). However, the proportion of first-time enrollees who disenroll within three months has been declining, as has the proportion of disenrollees who return to fee-for-service Medicare. This suggests that beneficiaries are becoming more familiar with the concept of managed care, and perhaps more satisfied with it.

Reenrollment in another plan may be the result of greater competition. As the number of plans increases, they may step up their marketing activities and offer more attractive benefit packages or provider networks to beneficiaries. Those already enrolled in plans might decide to switch to improve their coverage or to follow a provider who has moved to the new plan.

As of January 1995, half the beneficiaries in risk plans had been enrolled in their current plan for more than two years. One-quarter had been in their plan for more than four years. Most beneficiaries

Table 2-6. Risk Plan Disenrollees Who Returned to Fee-for-Service Medicare, by Length of Enrollment, 1990-1994 (In Percent)

Year of Enrollment	Enrollment Length (In Months)				
	< 3	3-6	6-9	9-12	12-24
1990	77.1%	64.7%	56.6%	54.6%	49.6%
1991	76.4	64.8	56.8	51.1	50.2
1992	66.6	55.0	48.5	45.3	30.9
1993	59.4	43.8	39.5	35.8	—
1994	60.5	44.1	32.7	—	—

Note: Disenrollees are considered to have returned to fee-for-service Medicare if they did not re-enroll in another plan within 90 days.

SOURCE: ProPAC analysis of Group Health Plan Master File data from the Health Care Financing Administration.

had been enrolled in only one contract. Thus, plans appear to retain members over time and do not seem to lose many members to new market entrants.

Medicaid

Like the private sector and Medicare, state Medicaid programs have been reshaping the financing of health care services for their beneficiaries. Medicaid is administered by states and funded jointly by the Federal government and states. Its funds are used to pay for medical services for low-income pregnant women and children as well as low-income elderly, blind, and disabled people, or others receiving monies through the Federal Aid to Families with Dependent Children program. Most Medicaid recipients do not have access to health insurance through an employer and cannot afford individual insurance policies. In 1994, Medicaid funded services for 35 million people at a cost of $138 billion. After elementary and secondary education, this program is the largest component of state budgets, representing 19 percent of total state expenditures in 1994.[29]

During the late 1980s and early 1990s, Medicaid spending skyrocketed, climbing by 69 percent over the two-year period between 1990 and 1992, from $69 billion to $116 billion. This growth was largely attributable to states' use of provider tax and donation programs to obtain additional monies from the Federal government. These programs have since been restricted by Federal legislation and spending has leveled off. Between 1992 and 1994, Medicaid spending increased from $116 billion to $138 billion, or about 9 percent annually.[30]

The growth in Medicaid spending has caused states to turn to managed care as one way to constrain expenditures. Under the Federal statute, states must allow Medicaid recipients to choose their own providers. To restrict recipient choices to those providers that participate in a managed care arrangement, states must receive a waiver from the Federal government.

The two most common waivers involve Sections 1115 and 1915(b) of the Social Security Act. Section 1115 waivers generally are reserved for major demonstration programs that the Federal government views as experimental. States seeking to implement statewide managed care programs, such as Tennessee and Oregon, have obtained Section 1115 waivers. The Federal government has approved 13 such waivers and is reviewing 10 others.[31] Section 1915(b) waivers allow states to implement mandatory managed care plans without having to meet the formal requirements of a Section 1115 program. Often these waivers are sought for managed care programs in specific areas within a state. As of February 1996, 41 states and the District of Columbia had been granted Section 1915(b) waivers.[32]

Medicaid managed care enrollment has grown even more rapidly than private sector enrollment. In 1991, 2.7 million recipients, or 9.5 percent of Medicaid population, were enrolled in some type of managed care program (see Table 2-7). By 1995, this had risen to 11.6 million people, or 32.1 percent of the Medicaid population—an increase well over 300 percent.

Most Medicaid managed care programs cover acute care services only, and participation is limited to children and low-income adults who are not elderly or disabled. Much of Medicaid spending, however, is devoted to the elderly and disabled, who are heavy users of long-term care and who accounted for 59 percent of total Medicaid spending in 1994.[33] This limits managed care's potential to achieve savings for the Medicaid program.

There are three types of Medicaid managed care arrangements: fee-for-service primary care case management (PCCM), full risk health maintenance organizations, and limited risk prepaid health plans. (see Table 2-8). In PCCM programs—the least

Table 2-7. Medicaid Managed Care Enrollment, 1991-1995

Year	Total Medicaid Enrollees (In Millions)	Medicaid Enrollees in Managed Care*	
		Number (In Millions)	Percent of Total
1991	28.3	2.7	9.5%
1992	30.9	3.6	11.8
1993	33.4	4.8	14.4
1994	33.6	7.8	23.2
1995	36.2	11.6	32.1

* Includes health maintenance organizations, prepaid health plans, primary care case management, and health insuring organizations.

SOURCE: Health Care Financing Administration, Office of Managed Care.

Table 2-8. Medicaid Managed Care Enrollment, by Organization Type, 1995 (In Percent)

Organization Type	Enrollment Share
Health maintenance organization	44.1%
Prepaid health plan*	22.9
Primary care case management	31.2
Other	1.8

* These arrangements cover a limited number of services in exchange for a capitation rate, the remaining services are paid on a fee-for-service basis.

SOURCE: Health Care Financing Administration, Office of Managed Care.

restrictive type of arrangement—providers are paid on a fee-for-service basis, but service use is monitored by an individual's primary care physician. These physicians are paid a monthly per person management fee to compensate for their additional responsibilities. Under a full risk HMO plan, Medicaid pays a capitation amount to an HMO that agrees to cover a defined set of services, regardless of the number, type, or cost of services enrollees actually use. Limited risk prepaid health plans are similar, but only specified services are covered under the capitation rate; the rest are paid on a fee-for-service basis. In 1995, 44 percent of Medicaid managed care participants were enrolled in full risk HMOs, 31 percent in PCCM programs, and 23 percent in limited risk prepaid health plans.

Individuals

About 7 percent of the nonelderly population purchased their own health insurance in 1994.[34] Generally these people were either self-employed or worked for employers that did not provide health insurance benefits. Financing is the major barrier to buying insurance. Those who earn too much to qualify for Medicaid must buy insurance with after-tax dollars.[35] Most insurers do not combine individuals with employer-sponsored groups for purposes of spreading the financial risks of service utilization. Thus, individuals—especially those who are older or have health problems—usually face higher premiums.

Both the Federal government and a number of states have attempted to address this problem. The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) requires employers that provide health insurance to continue that coverage for up to 18 months for employees who have been terminated or whose work hours have been reduced. The employee must pay for this coverage, but the payment may not exceed 102 percent of the applicable premium.[36] While this COBRA provision increases the likelihood that laid-off workers will purchase insurance, it does not apply to firms with fewer than 20 workers, which are the least likely to offer coverage in the first place.

States have implemented various programs designed to encourage individuals to purchase insurance by reducing premiums.[37] These include creating insurance pools that consolidate individuals' purchasing power and subsidizing insurance premiums for high-risk persons who otherwise could not afford to purchase coverage.

Several states have also implemented some type of community rating legislation. In its purest form, community rating prohibits insurers from using health status or prior utilization of health care services to set premium rates. Under these laws, individual purchasers generally pay similar rates, thus protecting sicker or older persons who otherwise would pay higher premiums. Younger, healthier individuals, however, usually pay higher premiums than they normally would. It is difficult to evaluate the impact of these programs because of states' limited experience with them.[38]

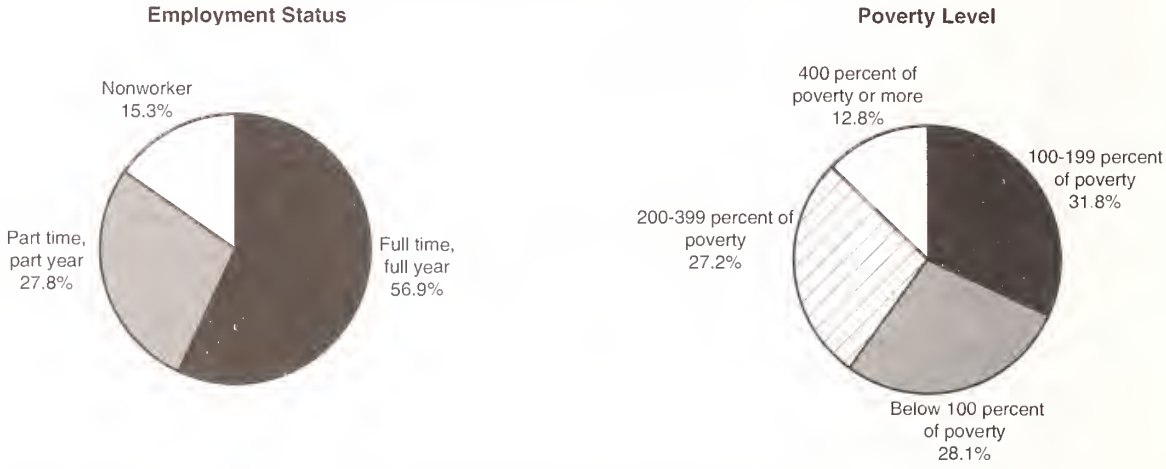
The Uninsured

Lack of health insurance continues to be a problem for a significant number of U.S. residents. More than 39.7 million people, or 15.2 percent of the population, were uninsured at a given point in time in 1994.[39] Though not markedly different from 1993, the share has grown steadily over the past few years.[40] In 1987, for example, 12.9 percent of U.S. residents were uninsured; by 1990, this figure had risen to 13.9 percent.

The nonelderly uninsured population consists largely of employed workers and their dependents, most with family incomes above the Federal poverty level. Almost 57 percent of the uninsured in 1994 were in families headed by a full-time worker, and nearly 13 percent had incomes at or above 400 percent of the poverty level (see Figure 2-8).

People with low incomes, however, are more likely to be uninsured, even though Medicaid offers

Figure 2-8. Nonelderly Uninsured Population, by Head of Household Employment Status and Poverty Level, 1994 (In Percent)



SOURCE: Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the 1995 Current Population Survey.* Issue Brief Number 170, 1996.

some protection to the very poor. Of those living below the poverty level, 31.9 percent of the nonelderly were uninsured in 1994, compared with 6.5 percent with incomes at or above 400 percent of poverty. A larger share (36.1 percent) of the nonelderly with incomes between $10,000 and $14,999 were uninsured than people with incomes between $5,000 and $9,999 (27.7 percent). Evidence indicates that expansion in the Medicaid program from the late 1980s through the early 1990s kept the uninsured rate for the very poor from rising, even though the overall rate grew.[41]

Employment status and income are related strongly to the likelihood of being without insurance. Nonelderly people in families headed by a full-time worker for the entire year are less likely to be uninsured than those in families headed by someone who works part time or less than the entire year.[42] In 1994, 13.7 percent of those in families with a full-time worker were uninsured, compared with 28.2 percent in families headed by a part-time worker and 23.4 percent headed by a nonworker.

In measuring the size of the uninsured population, one should bear in mind that these figures reflect the lack of insurance at a particular point in time: During the course of an entire year, many more people will face this problem, although far fewer will be without insurance for an extended period. In calendar year 1992, for instance, 20.3 percent of nonelderly U.S. residents lacked insurance for at least one month; 7 percent had no coverage for the full year.[43] During a 32-month period between 1991 and 1993, 26.5 percent were uninsured for at least one month. Half the spells without health insurance lasted more than seven months.

IMPLICATIONS FOR ACCESS AND QUALITY

The traditional method of financing health care in the United States has contributed to unparalleled escalation in health expenditures. But it also has purchased freedom of choice for patients, control over pricing for providers, and immediate access to high-cost technologies for most of the population. Importantly, too, it has provided a means of furnishing health care even to those who could not pay for it.

As payers seek to constrain the growth of health spending, access to and quality of care may be compromised. Insured people may find the adequacy of their coverage diminished by exclusion of certain conditions, limits on total spending, and restrictions on their choice of providers. Providers will encounter financial incentives to limit the number and costliness of services delivered. Reductions in total health spending may also delay advances in medical technologies.

The focus on cost containment has implications for the uninsured. Traditionally, people without insurance—particularly those lacking the means to pay for care out of pocket—have received care from providers free or at reduced prices. To varying degrees, hospitals have funded this care by cost shifting, or obtaining private payer revenues in excess of costs. As private payers seek to reduce their costs by negotiating lower prices for hospital services, however, hospitals may have difficulty generating the surplus revenue needed to fund uncompensated care. For the uninsured and the underinsured, this may mean even less access to care that is already more restricted than for those with comprehensive insurance. And the care they do receive may be of lower quality.

Although the changes in financing and delivery have the potential to reduce quality of and access to care, they might also improve it. To the extent that inappropriate care is eliminated and care is better coordinated across providers, quality may be enhanced. In addition, if health system changes lower medical care costs, it may be easier for the poor and near-poor to get needed care. The challenge will be to ensure that vulnerable populations are protected as the health care environment is restructured.

Access

Access to health care refers to the ability of individuals to obtain the health care they need. Because there is no good measure of access, certain indicators are often used. Among these are the volume of services patients receive, the percentage of individuals with a regular source of care, or individuals' perceptions about whether they can get care when they need it. People may have difficulty obtaining appropriate medical care if they do not speak English, have low levels of income or education, lack means of transportation, or live in areas with provider shortages. But one of the biggest barriers to access is lack of health insurance.

As payers seek to constrain the growth of health spending, access to care may be compromised for the insured and the uninsured alike. Insurance with limited allowed payments per service or caps on the total amount of allowed spending per person may be inadequate to protect people from catastrophic health spending. Moreover, as private payers lower their payments to providers, hospitals may find their reduced revenues insufficient to fund uncompensated care.

The Role of Insurance—Health insurance is an important determinant of access to health care in the United States. Evidence suggests that nonelderly adults without health insurance receive in the range of 60 percent to 75 percent of the care delivered to adults with employer-sponsored group coverage.[44] Uninsured people have fewer physician visits and hospitalizations, even though they report poorer health status. Indeed, the gap between the use of health care by the uninsured and those insured through their employer appears to be larger for less healthy than for healthy adults.[45]

Uninsured persons may receive less health care because of a lower propensity to seek it. Yet even when decisions about health care utilization—for example, whether someone will be admitted to a hospital—are made by providers rather than by patients, the uninsured appear to receive fewer services. Not only are they less likely to be hospitalized, but they have shorter hospitalizations and receive fewer procedures than insured patients. In addition, they appear to have higher mortality rates.[46]

Even among the insured, access to care can vary widely depending on the comprehensiveness of benefits and the amount of cost sharing required. Among the elderly, for instance, beneficiaries covered only by Medicare are far likelier than those with both Medicare and private supplemental insurance to report having no usual source of health care and to describe their health status as fair or poor (see Table 2-9).[47] Beneficiaries without supplemental insurance are also less likely to visit a physician or a hospital outpatient facility or be admitted to the hospital.[48] Among the nonelderly insured population, almost 19 percent are underinsured, that is, they face the risk of out-of-pocket expenses exceeding 10 percent of family income. The poor, people 19 to 24 and 55 to 64 years old, African Americans, Hispanics, and those with individually purchased or small-group insurance are more likely to be underinsured by this measure.[49]

As efforts to constrain the growth of health spending intensify, the number of underinsured may increase. Adequacy of insurance coverage

Table 2-9. Effect of Health Insurance on Health Status and Usual Source of Care for the Elderly, 1991 (In Percent)

Health Status/ Health Care Source	Medicare Only	Medicare and Private
Health status		
Excellent	15.8%	19.1%
Very good	18.5	26.8
Good	26.8	31.0
Fair	24.4	17.1
Poor	14.0	5.9
Health care source		
None	19.0	7.3
Physician office[a]	56.6	82.4
Clinic[b]	4.5	7.4
Hospital[c]	7.8	2.2
Other[d]	12.2	0.7

Note: Reflects all elderly Medicare enrollees.

[a] Includes physician offices and clinics.

[b] Includes health maintenance organizations, rural health clinics, and other ambulatory non-physician clinics.

[c] Includes hospital emergency rooms and outpatient departments.

[d] Includes nursing homes and veterans, mental health, and unspecified facilities.

SOURCE: George C. Chulis and others, "Health Insurance and the Elderly: Data from MCBS," *Health Care Financing Review*, Spring 1993.

may be reduced by payers' attempts to limit expenditures. In addition, the growing use of capitation may limit choices for people whose insurance pays only for care furnished by specified providers. On the other hand, moderation of health care spending may increase opportunities for people to obtain needed care.

Other Barriers to Care—While the presence and comprehensiveness of insurance influence the number and types of services used, other barriers to health care may affect even those with broad coverage and low cost sharing. First, the supply of providers is not always adequate to meet demand, especially for rural residents and the urban poor. Race can also affect access to care. After controlling for insurance coverage and presenting conditions, hospitalized African Americans are significantly less likely to undergo a wide range of procedures and diagnostic tests. This is particularly true for certain high-cost services such as cardiac procedures.[50] In addition, language can pose a barrier for those who are not fluent in English. Finally, access to care may be limited for patients with certain chronic conditions.[51]

Financial Pressure and Uncompensated Care—When individuals need care for which they have limited or no insurance coverage, they have several options. They can pay for care out of pocket, forgo the care they need, or seek care from providers free or at reduced rates. Providers that routinely furnish these services include public hospitals, community and migrant health centers, public health clinics, and rural health clinics. Federal, state, and local governments are the principal sources of funding for these programs, but a large amount of care is furnished by all types of providers without payment: Hospitals, for example, delivered an estimated $16.8 billion in uncompensated care in 1994, only 19 percent of which was offset by government operating subsidies.[52]

To varying degrees, hospitals have funded uncompensated care by cost shifting, or obtaining private sector revenues that exceed costs. The ability of hospitals to cost shift, however, appears to be diminishing, as private payers seek to constrain their costs by negotiating lower prices for hospital services. The increased financial pressure may make the surplus revenue hospitals need to underwrite uncompensated care costs less available.

Preliminary ProPAC analysis suggests this may be the case. Between 1992 and 1994, hospitals facing financial pressure from private payers lowered their uncompensated care burdens (see Table 2-10).[53] The reduction in uncompensated care was greatest for hospitals facing the most financial pressure, that is, those whose private payment to cost ratios fell by more than 10 percent.

Table 2-10. Change in Hospitals' Uncompensated Care Burden, by the Change in Private Payment to Cost Ratios, 1992-1994 (In Percent)

Private Payer Share	Change in Private Payment to Cost Ratios			
	<-10%	-10 to 0%	0 to 10%	10%+
Low (bottom third)	-8.2%	-0.9%	0.5%	3.9%
Medium (middle third)	-12.2	-4.2	-2.4	13.4
High (top third)	-19.2	-7.5	-4.9	25.9

Note: Uncompensated care burden is hospital losses as a percentage of total hospital costs. Private payer share is private payer revenues as a percentage of total revenues.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

Hospitals with a high share of private payer revenues appeared to be more influenced by private payer pressure. When faced with declining private payment to cost ratios, they reduced their uncompensated care burden more than twice as much as other hospitals. Moreover, these hospitals had the lowest uncompensated care burden: Their aggregate uncompensated losses accounted for 4.9 percent of their total cost, compared with 10.6 percent for hospitals with low private payer shares.

These results indicate that as private payers continue to seek cost-cutting measures and negotiate discounts from providers, hospitals may no longer be able to rely on gains from private payers to pay for uncompensated care. Without this traditional funding mechanism, less uncompensated care may be furnished, while the numbers of uninsured and underinsured may continue to grow. Furthermore, the burden of producing this care may fall increasingly on the traditional safety net hospitals—public, large teaching, and inner-city facilities.

Quality

The way health care is delivered is changing as providers increasingly face incentives to reduce the number and intensity of services. On the one hand, those incentives may improve quality of care by curtailing inappropriate service utilization and encouraging better coordination of care. On the other, they may encourage providers to limit patients' treatment choices to the least expensive ones, even though other costlier therapies may be more effective. As more payers adopt capitation payment arrangements and managed care techniques, careful quality assessment and measurement will be needed to avoid constraining necessary and appropriate service use.

Although purchasers, policy makers, and researchers are devoting considerable resources to quality measurement, most would agree that the state of the art is unsatisfactory. This shortcoming stems from the fact that the practice of medicine is varied and many medical interventions have not been fully evaluated. Thus, much is not known about the most effective—much less the most efficient—way to care for a particular patient.

Traditionally, efforts to assess quality have focused on identifying care that improves the health of individuals.[54] Appropriate patient care is often difficult to define, however. Diagnosis and treatment decisions must be made with patients' individual characteristics—such as age, sex, and underlying conditions—in mind. Further, the wealth of available diagnostic and therapeutic technologies, each with its own benefits and risks, complicates medical decision making. As a result, opinions regarding appropriate patient care are disparate, even among medical experts.[55]

In addition, providers have preferences regarding their practice style as well as differences in their experiences and abilities, which can affect the medical decisions they make. Patients, too, have preferences regarding their care. What is considered appropriate care by patients and providers is thus often subjective.

Decision making may be informed by clinical research. Randomized clinical trials, for example, study the effectiveness of new medical interventions. Other efforts to identify appropriate treatment protocols for certain diseases have been undertaken by many groups. The Agency for Health Care Policy and Research, for example, has convened panels of recognized experts to identify and assess diagnostic and treatment strategies for a small number of diagnoses. Medicare and state Medicaid programs also conduct focused clinical projects and studies as part of their quality assessment and improvement activities. The vast majority of diagnostic and therapeutic interventions, however, have not been subject to extensive evaluation.[56]

Evaluations of various treatment regimens are complicated by inadequate measures of patient outcomes. Further, because patient classification systems are not well developed, it is difficult to compare these measures across providers or plans. Some providers care for more complex patients whose outcomes may be worse than average; without measures of case mix, an assessment of outcomes may inappropriately identify these providers as furnishing lower-quality care. Of course, even with adequate patient classification systems, it still is difficult to measure patient outcomes.

In recent years, attempts to assess quality have intensified as purchasers of care seek to measure not only the safety and effectiveness of care, but also its value.[57] Employers and other purchasers are seeking

assurance that their health care expenditures are buying the highest quality care available at a reasonable price. Increasingly, large employers are attempting to evaluate the care furnished by health plans instead of by individual providers. Unfortunately, these efforts are hampered by the same problems that have always plagued quality assessment.

Performance Measurement—Some purchasers are requiring health plans and providers to report their performance using standardized measures. These measures assign values to certain salient aspects of health plan delivery and management. Once these values are calculated, employers and other purchasers can use them to compare competing health plans. Development of performance measures is widespread and being carried out by benefits consulting firms, professional associations, health plans, and government. So many measures are available that at least two groups have sponsored initiatives to catalog and rate them.[58]

The Health Plan Employer Data and Information Set (HEDIS) is but one example of a set of measures that describes certain aspects of health plan performance (see Table 2-11). HEDIS is intended to reflect changes in measurement capability and purchaser priorities over time. Like other performance measurement sets, however, it has some shortcomings. These include the absence of risk adjusters to account for underlying differences in patient populations, measures on only a few medical conditions, emphasis on service use over health outcomes, inconsistency in calculating specific measures, and lack of a data-auditing requirement. In addition, the measures are not intended to be applied to the elderly population.

Accreditation—Medicare, Medicaid, and other private payers historically have encouraged hospitals and other health providers to undergo quality assessments by independent entities like the Joint Commission on Accreditation of Healthcare Organizations. More recently, standards were developed for accrediting health maintenance organizations by the National Committee for Quality Assurance (NCQA). Some purchasers use NCQA accreditation to choose among competing HMOs. NCQA's accreditation entails an in-depth review of the health plan's internal quality improvement efforts, utilization management, credentialing standards, member rights and responsibilities policies, provision of preventive health services, and maintenance

Table 2-11. Selected Health Plan Employer Data and Information Set Measures

Type	Measure	Description
Quality	Childhood immunization rate	Percentage of children receiving various vaccinations
	Cholesterol screening	Percentage of enrollees 40 to 64 given a cholesterol test
	Mammography screening	Percentage of women 52 to 64 given a mammogram within two years
	Cervical cancer screening	Percentage of women 21 to 64 receiving a Pap test within three years
	Diabetic retinal exam	Percentage of enrollees 31 to 64 given insulin or oral hypoglycemic with a retinal ophthalmoscopic examination
Access	Access to health services	(1) Percentage of enrollees 23 to 39 with a visit or a claim from a practitioner or provider (2) Percentage of enrollees 40 to 64 with a visit or a claim from a practitioner or provider
Utilization	High-occurrence/high-cost DRGs	Number of discharges, average length of stay, and average cost for selected DRGs
	Frequency of selected procedures	Counts of procedures performed

Note: DRG = diagnosis-related group. HEDIS = health plan employer data and information set.

SOURCE: National Committee for Quality Assurance, HEDIS 2.5, January 1995.

of medical records.[59] This assessment of health plans examines organizations' overall commitment to quality, but focuses predominantly on processes of care rather than on patient outcomes.

CONCLUSIONS

The organization and structure of the health care delivery system are undergoing unprecedented changes. Private and public purchasers are making concerted attempts to limit their health care outlays. This pressure is causing both insurers and providers to seek ways to deliver health care more efficiently.

Historically, payments to one type of provider had little effect on spending for others' services. This picture is changing as insurers—primarily through managed care plans—implement payment methodologies that link payments with performance by all providers. In response, providers of all types are entering into a broad array of relationships with each other. By doing so, they can negotiate for a larger share of the health care premium dollar and correspondingly exert greater influence over the provision of services.

Aligning financial incentives across provider types and between insurers and providers holds the promise of appropriately limiting health care spending growth as well as increasing the coordination of services. But it could also restrict access to needed services and constrain funding for other aspects of the health care system, including serving the uninsured, investing in new technologies, and teaching medical students and residents. The challenge for the health care system is to achieve the cost-containment benefits of a price-sensitive environment without unduly compromising access and quality.

Notes to Chapter 2

1. Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995* (New York: Foster Higgins, 1996)12.

2. KPMG Peat Marwick LLP, *Health Benefits in 1995* (San Francisco: KPMG, 1995) 26. Managed care participation rates for all insured persons are likely to be somewhat lower because individuals and employees of small firms often are not enrolled in managed care to the same extent as workers in large firms.

3. Ibid., 27.

4. Physician Payment Review Commission, *Arrangements Between Managed Care Plans and Physicians* (Washington, DC: PPRC, 1995).

5. American Association of Health Plans, *1995 Sourcebook on HMO Utilization Data* (Washington, DC: AAHP, 1995); U.S. Department of Commerce, *Statistical Abstract of the United States 1994*, September 1994, 128. Although the data on HMO utilization include HMO enrollees in all age groups, the figures are comparable because the number of HMO enrollees who are 65 and older represents a relatively small share of the overall HMO population.

6. Department of Health and Human Services, Office of Inspector General, *Hospital Closure: 1994*, February 1996. If a hospital merged with another facility, it was not considered to have closed unless it stopped providing acute care services.

7. Data from the American Hospital Association, National Panel Survey of Hospitals.

8. Ibid.

9. American Hospital Association, *Hospital Stat 95/96* (Chicago: AHA, 1995). These percentages may not reflect other arrangements among providers.

10. Project HOPE Center for Health Affairs, *A Multivariate Analysis of Hospital Financial Performance*, ProPAC Extramural Report, forthcoming.

11. American Medical Association, *Physician Marketplace Statistics 1995* (Chicago: AMA, 1996).

12. Data provided by the American Medical Association. Physicians were considered to be self-employed if they reported being full-time or part-time owners of their main practice. Otherwise, they were counted as employees unless they indicated they were independent contractors.

13. This section is based on information from a number of surveys of employee benefits, including those conducted by the Bureau of Labor Statistics and several private employee benefits consulting firms, among them KPMG Peat Marwick LLP, Foster Higgins, Hay/Huggins, and Towers Perrin. These surveys are not directly comparable with one another because they pose different questions to varying groups of firms. Moreover, due to limited sample sizes and changes in sample design and employer response rates, these surveys are not consistent over time and may not be generalizable to the entire population. Consequently, specific numbers (like the proportion of employers offering a particular type of health plan) should be viewed with caution.

14. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1995 Current Population Survey*, Issue Brief Number 170 (Washington, DC: EBRI, 1996).

15. Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995*. Total employer-sponsored health benefit costs per worker include both employers' and employees' contributions to the cost of health insurance for active and retired workers, divided by the number of active workers. Employer and employee payroll taxes for Medicare and employees' out-of-pocket spending for covered services are excluded.

16. U.S. Department of Labor, Bureau of Labor Statistics, "Employer Costs for Employee Compensation—March 1995," *News*, June 22,

1995. Estimates of employers' costs for employee compensation are based on a large sample of employers in non-farm private industries and state and local governments. Estimates of employers' costs for health insurance include spending for dental benefits and vision care.

17. KPMG, *Health Benefits in 1995*, 16. The information is based on data from a 1988 survey of 747 firms, conducted by the Health Insurance Association of America.

18. U.S. Department of Labor, Bureau of Labor Statistics, "BLS Reports on Employee Benefits in Small Private Industry Establishments, 1994," *News,* September 14, 1995.

19. Joel C. Cantor, Stephen H. Long, and M. Susan Marquis, "Private Employment-Based Health Insurance In Ten States," *Health Affairs* 14(2): 199-211, Summer 1995.

20. At least 40 states have enacted some type of legislation designed to increase access to health insurance for employees of small firms (generally defined as those with 50 or fewer workers). Many of these reforms focus on guaranteeing that insurers offer polices to all small employer groups or to all employees within an insured firm. Other reforms limit the ability of insurers to implement new waiting periods or exclude employees on the basis of preexisting conditions at the time of coverage renewal. Several states have also created purchasing pools for small employers to consolidate risk and reduce administrative costs.

21. Foster Higgins, *National Survey of Employer-Sponsored Health Plans, 1995.* Among all firms, those that offer health insurance coverage have an average payroll of about $25,600 per worker compared with $17,100 for those that do not.

22. Jack Meyer and others, *Employer Coalition Initiatives in Health Care Purchasing* (Washington, DC: Economic and Social Research Institute, 1996).

23. Eligibility for Medicare Part A is based on age or disability status. People who are 65 and older and receive cash benefits under Social Security (including Railroad Retirement beneficiaries) are automatically eligible for Part A benefits and pay no premiums. (The small number of elderly people who are not automatically eligible can purchase Part A coverage.) In addition, anyone with a permanent and total disability who has qualified for Social Security disability benefits for at least 24 months, as well as most people requiring chronic kidney dialysis or a kidney transplant to maintain life, can receive Part A coverage at no charge.

    Medicare Part B is open to everyone eligible for Part A. Currently, enrollees pay a Part B premium of $42.50 per month. Although Part B is a voluntary program, nearly all eligible beneficiaries elect to participate.

24. Jerold Hill and others, *The Impact of the Medicare Risk Program on the Use of Services and Costs to Medicare, Final Report* (Princeton: Mathematica Policy Research, Inc., 1992).

25. American Association of Health Plans, *1995 National Directory of HMOs* (Washington, DC: AAHP, 1995).

26. Ibid.

27. County-level AAPCCs were standardized for input price differences by dividing 70 percent of each county's AAPCC by a hospital wage index for the county and then adding back the remaining 30 percent. The hospital wage index was calculated using the Health Care Financing Administration's hospital wage and hour data for 1992 and the methods used to compute the PPS wage index, except that geographic reclassifications of hospitals were ignored. Standardized AAPCCs for counties above the 90th percentile of the distribution were more than 50 percent higher than those for counties below the 10th percentile.

28. For example, a beneficiary may realize only after joining a plan that it does not pay for care from an out-of-network provider. See Physician Payment Review Commission, *Biased Selection and Medicare HMOs: Analysis of the 1989-1994 Experience*, unpublished paper, December 1995.

29. National Association of State Budget Officers, *1994 State Expenditure Report*, April 1995.

30. Health Care Financing Administration, *Medicaid Statistics: Program and Financial Statistics, Fiscal Year 1994*, HCFA Pub. No. 10129, February 1996.

31. Ibid.

32. Data provided by the Health Care Financing Administration, Office of Managed Care.

33. Kaiser Commission on the Future of Medicaid, "The Medicaid Program At a Glance," *Medicaid Facts*, December 1995.

34. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured.* These figures represent "other private coverage," which is primarily individually purchased private insurance, but may also include a small amount of employer-sponsored coverage.

35. For 1995, self-employed persons can deduct 30 percent of their premium as a business expense when computing their adjusted income for tax purposes. 26 U.S. Code §162. By contrast, the full cost of employer-sponsored coverage is tax-deductible by the employer and is not viewed as taxable income to the employee. In addition, neither the employer nor the employee pays payroll taxes on health benefits.

36. 26 U.S. Code, § 4980B.

37. For more on this subject, see George Washington University Intergovernmental Health Policy Project, *Health Insurance: Group and Individual: An Overview of 1995 State Legislative Activity*. (Washington, DC: IHPP, 1995).

38. Institute for Health Policy Solutions, *State Experiences with Community Rating and Related Reforms*, report prepared for the Kaiser Family Foundation, September 1995.

39. Current Population Survey, March 1995, Bureau of the Census.

40. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured.* Methodological changes in the Current Population Survey between 1993 and 1994 preclude definitive conclusions about the change in this rate between those years.

41. John Holahan, Colin Winterbottom, and Shruti Rajan, "A Shifting Picture of Health Insurance Coverage," *Health Affairs* 14(4):253-64, Winter 1995.

42. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured.*

43. Bennefield, Robert L., *Dynamics of Economic Well-Being: Health Insurance, 1991 to 1993*, U.S. Bureau of the Census. Current Population Reports, P70-43, (Washington, DC: U.S. Government Printing Office, 1995).

44. M. Susan Marquis and Stephen H. Long, "The Uninsured Access Gap: Narrowing the Estimates," *Inquiry* 31(4):405-14, Winter 1994/1995.

45. Ibid.; Beth Hahn and Doris Lefkowitz, *Annual Expenses and Sources of Payment for Health Care Services*, National Medical Expenditure Survey Research Findings 14, AHCPR Pub. No. 93-0007 (Rockville, MD: U.S. Public Health Service, November 1992); Joel S. Weissman and Arnold M. Epstein, "The Insurance Gap: Does It Make a Difference?" *Annual Review of Public Health* 14:243-70, 1993; Stephen Long and Susan Marquis, *Universal Health Insurance and Uninsured People: Effects on Use and Cost* (Washington, DC: Office of Technology Assessment and Congressional Research Service, August 5, 1994).

46. Jack Hadley, Earl Steinberg, and Judith Feder, "Comparison of Uninsured and Privately Insured Hospital Patients," *Journal of the American Medical Association* 265(3):374-79, January 16, 1991; John Z. Ayanian and others, "The Relation Between Health Insurance Coverage and Clinical Outcomes Among Women with Breast Cancer," *New England Journal of Medicine* 329(5):326-31, July 29, 1993.

47. George S. Chulis and others, "Health Insurance and the Elderly: Data from the MCBS," *Health*

Care Financing Review 14(3):163-81, Spring 1993.

48. ProPAC analysis of data from the Health Care Financing Administration's 1992 Medicare Current Beneficiary Survey.

49. Pamela Farley Short and Jessica S. Banthin, "New Estimates of the Underinsured Younger Than 65 Years," *Journal of the American Medical Association* 274(16):1302-06, October 25, 1995.

50. Janet B. Mitchell and Rezaul K. Khandker, "Black-White Treatment Differences in Acute Myocardial Infarction," *Health Care Financing Review* 17(2):61-70, Winter 1995; Paul W. Eggers, "Racial Differences in Access to Kidney Transplantation," *Health Care Financing Review* 17(2):89-103, Winter 1995; A. Marshall McBean and others, "Differences by Race in the Rates of Procedures Performed in Hospitals for Medicare Beneficiaries," *Health Care Financing Review* 15(4):77-90, Summer 1994.

51. Emily Friedman, "Money Isn't Everything: Nonfinancial Barriers to Access," *Journal of the American Medical Association* 271(19): 1535-38, May 18, 1994.

52. ProPAC analysis of data from the American Hospital Association's Annual Survey of Hospitals.

53. Hospitals described as facing financial pressure from private payers were those that expeienced reductions in their private payment to cost ratios, in that they were unable to scale back cost growth to match reduced rates of payment increases.

54. R. Heather Palmer, "Considerations in Defining Quality of Health Care," in *Striving for Quality in Health Care: An Inquiry into Policy and Practice*, eds. R. Heather Palmer, Avedis Donabedian, and Gail J. Povar, (Ann Arbor, MI: Health Administration Press, 1991).

55. David M. Eddy, "Variations in Physician Practice: The Role of Uncertainty," *Health Affairs* 3(2):75-89, Summer 1984.

56. David A. Grimes, "Technology Follies: The Uncritical Acceptance of Medical Innovation," *Journal of the American Medical Association* 269(23):3030-33, June 16, 1993; and James P. Kahan and others, "Measuring the Necessity of Medical Procedures," *Medical Care* 32(4):357-65, 1994.

57. R. Heather Palmer, "Considerations in Defining Quality."

58. The Agency for Health Care Policy and Research is supporting the Computerized Needs-Oriented Quality Measurement Evaluation System, and the Joint Commission on Accreditation of Healthcare Organizations is developing a National Health Library of Indicators.

59. As of February 1996, 121 HMOs had obtained at least provisional NCQA accreditation, 27 were denied accreditation, and 113 were waiting to be reviewed. Accreditation Status List, National Committee for Quality Assurance, February 29, 1996.

Chapter 3

Hospital Payments, Costs, and Financial Condition

Chapter 3

Hospital Payments, Costs, and Financial Condition

Although the proliferation of alternative sites of acute, ambulatory, and post-acute care has altered the role of hospitals, they still account for a larger share of health spending (36 percent in 1994) than any other type of provider. Moreover, hospitals and other providers increasingly are entering into relationships that make their provision of health care and financial performance more interdependent, as described in Chapter 2. How hospitals respond to their changing environment is of interest, therefore, not only because they are the largest component of the health care system, but also because they are integrally related to the system's other providers.

This chapter examines trends in hospital payments and costs as well as the factors that influence these trends and how they affect hospitals' financial condition. It begins by reviewing Medicare payment policy and the distribution of payments under the prospective payment system (PPS) for hospitals. Medicare inpatient operating costs are described, and the resulting PPS margins are presented.

Among the most important determinants of hospital costs are utilization and capacity, employment, capital, and services and supplies. The trends in those factors are also examined in this chapter. The overall financial condition of hospitals is then described, focusing first on the growth of inpatient and outpatient revenues and then on the patterns of total hospital revenue and expense growth and the total hospital margin, which compares revenues and expenses. Finally, the relationship between the payment policies of different payers is examined in a discussion of cost shifting by hospital group.

MEDICARE HOSPITAL PAYMENTS AND COSTS

Medicare pays for inpatient care for Medicare beneficiaries at acute care hospitals using predetermined per case payment rates through the prospective payment system. These hospitals also provide—and Medicare purchases—a wide variety of other services. As a result, acute care hospitals receive substantially more revenue from Medicare than PPS payments alone.

Payments for Medicare hospital services, which are expected to total $115.9 billion in fiscal year 1996, have several components (see Table 3-1). The largest category is PPS inpatient operating costs, about $69.1 billion or 60 percent of the total. Nine-tenths of this will come from the Medicare program and the rest from beneficiaries for deductibles and coinsurance. PPS hospitals will also receive some $8.8 billion in capital payments. Another $12.5 billion, or 11 percent of the total, will be paid for operating and capital costs in PPS-excluded facilities, mostly psychiatric and rehabilitation hospitals and distinct-part units. This amount is split about evenly between PPS-excluded hospitals and PPS hospitals with distinct-part units. Payments for Medicare-covered hospital outpatient services will be $23.2 billion, or 20 percent of the total. In this case, a far larger share—almost two-fifths—will come from beneficiaries. Finally, hospitals will receive $2.3 billion, or about 2 percent of the total, for the direct costs of training programs, including those for interns and residents and for nursing and allied health personnel.

Medicare payments and costs have a major impact on hospital financial condition, since payment policies for inpatient care and other services not only determine how funds are distributed, but also create incentives that influence hospital behavior. This section describes Medicare payment policies, emphasizing PPS payments and how they have changed over time, the corresponding trend in costs, and the resulting PPS margins.

PPS Payments

In 1983, the Congress enacted legislation that created the prospective payment system for Medicare

Table 3-1. Estimated Total Medicare Payments to Hospitals, by Payment Type, Fiscal Year 1996 (In Billions)

Payment Type	Amount
Total	$115.9
PPS operating	69.1
Medicare program	62.4
Beneficiary deductibles and copayments	6.7
PPS capital	8.8
Non-PPS operating	11.5
Medicare program	10.4
Beneficiary deductibles and copayments	1.1
Non-PPS capital	1.0
Outpatient	23.2
Medicare program	14.0
Beneficiary deductibles and copayments*	9.2
Direct medical education	2.3
Interns and residents	2.0
Nursing and allied health	0.3

Note: Payments are incurred benefit payments during the fiscal year.

* Estimate based on ProPAC analysis of Health Care Financing Administration data.

SOURCE: Congressional Budget Office, March 1996 estimates.

hospital inpatient services. Under PPS, each hospital receives a fixed payment to cover the operating costs associated with each discharge. The hospital's basic payment rate is based on a national standardized payment amount, which is higher for hospitals in large urban areas (metropolitan statistical areas, or MSAs, with a population of more than one million) than for other hospitals.[1] To account for differences in hospital wage rates across areas, the standardized payment amount is adjusted by a wage index for each MSA and for the rural areas in each state.[2] The wage index measures the relative level of wages for hospital workers in each labor market compared with the national average.

Payment also depends on the relative costliness of the case, based on the diagnosis-related group (DRG) to which the patient is assigned. For each DRG, a relative weight is computed that represents the average standardized charges for discharges in that DRG compared with the national average for all Medicare discharges. The wage-adjusted standardized payment amount is multiplied by the relative weight for each DRG to obtain the basic DRG payment rate for that type of case.

A hospital's basic DRG payments thus reflect its location, local wage rates, and mix of Medicare cases. These factors partly explain why PPS payments are higher for some types of hospitals than for others. For example, hospitals in urban areas receive greater payments per discharge than those in rural areas, reflecting historical and continuing differences in costs. Wage rates in urban labor market areas generally exceed those in rural areas. In addition, urban hospitals are likely to treat a more complex and costly mix of Medicare cases, and to provide care that is more resource-intensive.

Besides the basic DRG rates, hospitals receive extra payments under PPS for cases with extraordinarily high costs or unusually long stays (outliers).[3] Payments are also adjusted for hospitals that operate graduate medical education programs to train residents or that serve a disproportionate share of low-income patients. These factors further increase the amounts paid to urban hospitals compared with rural facilities. Hospitals in urban areas are much more likely to have outlier cases, and most teaching and disproportionate share (DSH) hospitals are urban.

Major Policy Changes—Policy changes enacted in the Omnibus Budget Reconciliation Acts (OBRA) of 1989 and 1990 had a major effect on both the aggregate level and distribution of PPS payments. One of the most important was the gradual elimination of the difference in the standardized amounts for rural and other urban hospitals. In addition, the number of rural hospitals receiving the DSH adjustment was expanded and the size of the adjustment was increased for many urban hospitals. Another major change was the basis of payment for sole community hospitals (geographically isolated facilities considered to be the only available source of inpatient care for the community). These hospitals now receive payment based on their updated 1982 or 1987 costs or the PPS rate, whichever is greatest.

For payment purposes, OBRA 1989 allows hospitals to request reclassification from the geographic area in which they are located to another one that is more advantageous. This reclassification, which must be approved by the Medicare Geographic

Classification Review Board (MGCRB) each year, can change the hospital's standardized payment amount or wage index, or both. While slightly more than 1,200 hospitals were reclassified for fiscal year 1993, the criteria were modified the following year, significantly reducing the number eligible for reclassification. Only about 700 hospitals were reclassified for fiscal year 1995, and about 600 for fiscal year 1996.

Case-Mix Change—A significant factor complementing payment policy changes has been the increase in the Medicare case-mix index (CMI). The CMI for a hospital or group of hospitals is the average DRG relative weight for the Medicare cases they treat. Because the payment for each case is determined by multiplying the standardized payment amount by the applicable relative weight, CMI changes directly affect both the aggregate amount of PPS payments and the distribution of payments among hospitals. A hospital's CMI will increase when patients are assigned to higher-weighted DRGs. This could result from treating patients who are more severely ill or who use more complex services, which raises treatment costs, or from refining medical record documentation and coding practices, without any real change in costliness.

CMI change has accounted for much of the rise in per case payments nationally, having increased by 32.4 percent cumulatively from the first year of PPS through 1996. Historically, the distribution of CMI change across hospitals has often differed from the pattern of payment policy effects.[4] Nonetheless, the hospital groups that have been targeted for special treatment have benefited from a net increase in payments per case after considering both CMI change and policy effects.

Distribution of PPS Operating Payments

In fiscal year 1996, PPS operating payments are expected to continue to vary substantially among hospital groups (see Table 3-2).[5] For example, while 56 percent (2,893) of the 5,153 PPS hospitals are located in urban areas and will account for 80 percent of PPS discharges, urban hospitals will receive an estimated 87 percent of PPS operating payments. Rural hospitals, by contrast, will account for 20 percent of PPS discharges, but will get 13 percent of PPS payments.

Hospital size is related to the share of operating payments facilities receive. As size increases, the relative share of these payments tends to rise. For example, 23 percent of all PPS hospitals are rural facilities with fewer than 50 beds, but they will account for only about 4 percent of PPS discharges and 2 percent of PPS payments in fiscal year 1996. By contrast, urban hospitals with 500 or more beds represent less than 4 percent of all PPS hospitals but are expected to have 14 percent of discharges and to receive 20 percent of PPS payments.

Variations in the share of PPS operating payments reflect a combination of differences in Medicare discharge volume and other factors that affect each hospital's average payment per discharge. These include local wage rates and the mix of cases treated, which affect the basic DRG payment rate, as noted earlier. How these payments are distributed is also influenced by the presence of outlier cases, the operation of a graduate medical education program, and the treatment of a disproportionate share of low-income patients. The Congress included all of these factors in the payment system to compensate for differences in the costs of treating Medicare patients that are beyond hospitals' control, as well as to accomplish broader policy objectives.

Outlier Payments—Outlier payments are intended to protect hospitals from the risk of financial losses associated with cases having exceptionally high costs or unusually long stays. They are also designed to mitigate the incentive to avoid patients who are likely to become costly or to treat them inappropriately. In fiscal year 1996, outlier payments are expected to account for 4.5 percent of total PPS operating payments, or about $3.1 billion. This is equivalent to 5.1 percent of total DRG payments excluding the indirect medical education and disproportionate share adjustments.

Outlier payments are funded by a 5.1 percent reduction in the standardized payment amounts. The reduction represents the Health Care Financing Administration's (HCFA) projection of the approximate share of total DRG payments (basic DRG payments plus the outlier amount) that will be attributable to outlier payments in the next year. Outlier payments are made, however, according to the actual incidence of outlier cases. The policy's net effect on a given hospital's PPS payments

Table 3-2. Distribution of PPS Hospitals and Discharges and Estimated Fiscal Year 1996 PPS Operating Payments, by Hospital Group

Hospital Group	Number of PPS Hospitals	Percent of Discharges	Percent of Payments	PPS Operating Payments (In Billions)			
				Total	Outlier	IME	DSH
All hospitals	5,153	100%	100%	$69.1	$3.1	$4.3	$4.3
Urban	2,893	80	87	60.2	2.9	4.2	4.0
Rural	2,260	20	13	8.9	0.2	0.1	0.2
Large urban	1,618	46	54	37.3	1.8	3.2	2.6
Other urban	1,275	34	33	22.9	1.1	1.0	1.4
Rural referral	139	4	3	2.2	0.1	0.1	0.1
Sole community	636	4	3	1.7	*	*	*
Other rural	1,485	12	7	4.9	0.1	*	0.1
Major teaching	246	11	19	13.0	0.6	2.8	1.4
Other teaching	815	32	34	23.7	1.1	1.4	1.4
Non-teaching	4,092	57	47	32.4	1.3	0.0	1.5
DSH:							
Large urban	796	24	32	21.8	1.0	2.4	2.6
Other urban	674	21	22	15.3	0.7	0.8	1.4
Rural	487	6	4	2.9	0.1	*	0.2
Non-DSH	3,196	48	42	29.1	1.3	1.0	0.0
Teaching and DSH	674	27	36	25.0	1.2	3.2	2.8
Teaching only	387	16	17	11.7	0.6	1.0	0.0
DSH only	1,283	24	22	15.0	0.6	0.0	1.5
No teaching or DSH	2,809	33	25	17.3	0.7	0.0	0.0
Urban <100 beds	738	5	3	2.3	0.1	*	*
Urban 100-199 beds	907	17	16	10.9	0.4	0.2	0.8
Urban 200-299 beds	586	20	20	14.1	0.6	0.5	0.8
Urban 300-399 beds	323	15	17	11.7	0.6	0.7	0.8
Urban 400-499 beds	161	9	11	7.6	0.4	0.8	0.6
Urban 500+ beds	178	14	20	13.5	0.7	1.9	1.1
Rural <50 beds	1,177	4	2	1.4	*	*	*
Rural 50-99 beds	664	6	4	2.5	0.1	*	*
Rural 100-149 beds	226	4	3	1.8	*	*	0.1
Rural 150-199 beds	108	3	2	1.3	*	*	*
Rural 200+ beds	85	3	3	1.8	0.1	0.1	0.1
New England	217	6	6	4.3	0.1	0.5	0.1
Middle Atlantic	525	17	20	13.6	0.8	1.4	0.9
South Atlantic	735	18	17	11.6	0.5	0.5	0.8
East North Central	795	18	17	11.9	0.5	0.9	0.5
East South Central	442	8	7	4.7	0.2	0.1	0.3
West North Central	725	8	7	4.8	0.2	0.3	0.1
West South Central	741	10	10	6.6	0.3	0.2	0.5
Mountain	346	4	4	2.7	0.1	0.1	0.1
Pacific	627	11	13	8.9	0.3	0.4	0.8
Voluntary	3,018	75	76	52.7	2.4	3.4	2.8
Proprietary	706	11	10	7.1	0.3	0.1	0.5
Urban government	416	8	10	6.8	0.3	0.7	0.9
Rural government	953	6	4	2.5	0.1	*	0.1

Note: PPS payments estimated using rules in effect as of October 1, 1995. Numbers may not sum due to rounding. Excludes hospitals in Maryland. IME = indirect medical education. DSH = disproportionate share.

* Less than $0.05 billion.

SOURCE: Estimates based on ProPAC PPS payment model, Congressional Budget Office March 1996 forecasts, and fiscal year 1994 MedPAR file data from the Health Care Financing Administration.

depends on whether the hospital's outlier payments as a proportion of total DRG payments are more or less than the 5.1 percent reduction in its standardized payment amount.

Outlier payments are not evenly distributed across hospitals, because some hospitals are likelier to treat cases with exceptionally high costs or long stays. Urban hospitals, for example, are expected to receive 94 percent of all outlier payments and rural hospitals only 6 percent. Similarly, while teaching hospitals are expected to account for 43 percent of PPS discharges, the Prospective Payment Assessment Commission (ProPAC) estimates they will receive 55 percent of outlier payments. Hospitals in the Middle Atlantic region have 17 percent of PPS discharges, but will receive an estimated 26 percent of outlier payments.

As with other aspects of PPS payment, the uneven distribution of outlier payments does not indicate that the outlier policy is inequitable. Certain hospitals treat a more diverse mix of patients and thus face a greater risk that some will require an extraordinary amount of resources. In fact, those hospitals with a high proportion of outlier payments in any particular year have been shown to be more likely than others with similar characteristics to incur Medicare losses.

Indirect Medical Education and Disproportionate Share Payments—In fiscal year 1996, indirect medical education (IME) and DSH payments are expected to account for 12.4 percent of all PPS operating payments, or about $8.6 billion.

The IME adjustment is intended to recognize hospitals' indirect costs of operating approved graduate medical education programs. Compared with other facilities, teaching hospitals not only offer a wider range of services and technologies, but treat patients who are more severely ill. They also tend to provide a greater number and a more expensive mix of diagnostic and therapeutic services to certain types of patients.

PPS accounts for the indirect costs of teaching by applying a hospital-specific percentage adjustment to each teaching hospital's total DRG payments. The size of a hospital's IME adjustment varies according to the intensity of its graduate medical education activities as measured by the ratio of interns and residents per bed. In fiscal year 1996, IME payments are expected to account for 6.2 percent of total PPS operating payments, or $4.3 billion.

The DSH adjustment is intended to compensate hospitals that treat large proportions of low-income patients. Such hospitals are thought to have higher costs than otherwise similar hospitals for a variety of reasons, including their location and the characteristics of their patient population. They also tend to have greater uncompensated care burdens. DSH payments are expected to account for 6.2 percent of total PPS operating payments, or about $4.3 billion in fiscal year 1996.

Almost all IME and DSH payments (98 percent and 93 percent, respectively) are expected to go to facilities located in urban areas. These payments thus will account for a larger share of total PPS revenues in urban than in rural facilities. In general, larger hospitals also receive more of their PPS revenues from IME and DSH payments than do smaller ones. For example, in fiscal year 1996 these adjustments will make up 22 percent of PPS operating payments for urban hospitals with 500 or more beds, but less than 1 percent for rural hospitals with fewer than 50 beds.

There is also substantial overlap between the teaching and DSH adjustments. Teaching hospitals are expected to account for 65 percent of all DSH payments, while 74 percent of teaching payments will go to disproportionate share hospitals. As a result, teaching and DSH payments will represent a major source of revenue for some hospitals. For instance, major teaching hospitals (those whose ratio of residents to beds is greater than 0.25) will receive an estimated 32 percent of their PPS operating payments from the teaching and DSH adjustments. Basic DRG payments will account for only 68 percent of operating payments to these hospitals. By contrast, non-teaching hospitals are expected to depend on basic DRG payments for 91 percent of their operating payments.

DSH and teaching payments are also distributed unevenly across geographic areas. Hospitals in the Middle Atlantic and East North Central regions combined will receive 53 percent of all teaching payments yet account for only 35 percent of Medicare discharges. DSH payments are expected to go predominantly to hospitals in the Middle Atlantic,

South Atlantic, and Pacific regions (21 percent, 19 percent, and 19 percent, respectively). By contrast, these regions account for a considerably smaller share of Medicare discharges (17 percent, 18 percent, and 11 percent, respectively).

Trends in PPS Operating Payments and Costs

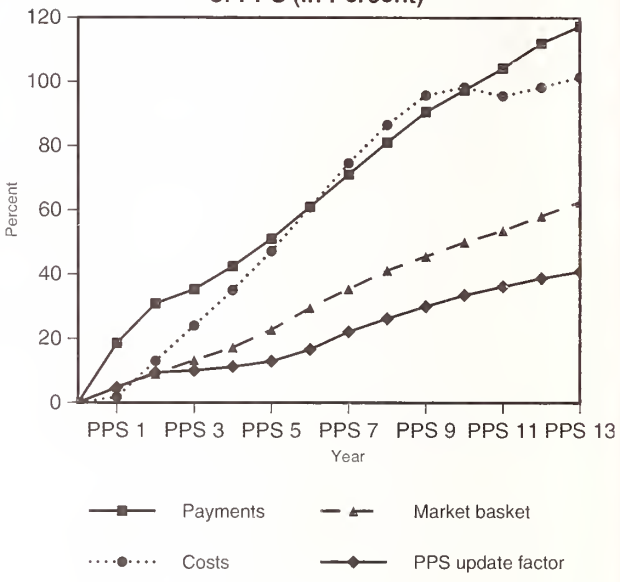
The primary objectives of PPS are to control Medicare payments and create incentives for hospitals to become more efficient and constrain their costs. Data on trends in PPS payments and costs provide insight into how hospitals have responded to these incentives.

PPS Operating Payments—Despite Medicare's better control over payment rates under PPS, the increase in payments per discharge during the first 13 years of PPS was almost three times as great as the cumulative value of the annual payment update factor (see Figure 3-1). Much of this difference in growth rates occurred in the first two years of prospective payment, when payments per discharge rose by 18.5 percent and 10.5 percent, respectively (see Table 3-3). This is attributable to two factors. First, the base year hospital costs on which the initial PPS rates were set were overestimated due to the use of unaudited Medicare Cost Reports. Additionally, there was a large increase in the aggregate CMI in the early years because of a greater emphasis on accurate DRG coding and complete documentation of the medical record.

During the nine years that followed, payments per case grew at an average rate of 5.0 percent. After an increase of 3.4 percent in the third year, per case payments rose by at least 5 percent in each of the following six years. This happened primarily because of large increases in both the PPS market basket index and the aggregate Medicare case-mix index. In the tenth and eleventh years, the CMI grew more slowly and the PPS update was lower, resulting in the smallest two-year increase in payments per case since the beginning of PPS.

PPS Operating Costs—The trends in PPS operating costs and payments have been quite different. One reason is that, while PPS payment rates are explicitly determined by decisions made by or for the Medicare program, operating costs reflect providers' decisions about how to deliver services for all of their patients, not just those covered by Medicare.

Figure 3-1. Cumulative Increases in PPS Operating Payments and Costs Per Discharge, First 13 Years of PPS (In Percent)



Note: The PPS market basket and update factor are for the corresponding Federal fiscal year (1984 for PPS 1, etc.). Payments and costs are estimated for PPS 12 and PPS 13.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Costs per case went up only 1.8 percent in the first year of PPS but then began to climb rapidly. In the second through the seventh years, operating costs per case grew by at least 8.6 percent in every year, averaging 9.4 percent. This was substantially more than operating payments per case rose over the same period. By the seventh year, cumulative cost growth had exceeded combined payment increases.

There has been a marked change in the cost trend since the seventh year. This change began as the aggregate PPS operating margin became negative for the first time and other changes in health care markets increased financial pressures on hospitals. (See Chapter 2.) The 6.9 percent growth in operating costs per case in the eighth year was the smallest since the first year of PPS, and the rise of 1.3 percent in the tenth year was below economy-wide price inflation. Costs actually decreased by 1.3 percent in the eleventh year.

Table 3-3. Annual Change in PPS Operating Costs and Payments, First 11 Years of PPS (In Percent)

Year	PPS Costs and Payments						Consumer Price Index[b]
	Operating Costs	Payments	Operating Costs Per Case	Payments Per Case	Market Basket Index	Update Factor[a]	
PPS 1	-4.6%	11.0%	1.8%	18.5%	4.9%	4.7%	4.1%
PPS 2	4.7	4.2	11.0	10.5	3.9	4.5	3.7
PPS 3	5.6	-0.5	9.7	3.4	3.9	0.5	2.5
PPS 4	7.4	3.9	8.9	5.3	3.5	1.2	2.9
PPS 5	9.8	6.7	9.0	6.0	4.7	1.5	4.1
PPS 6	10.4	7.7	9.3	6.6	5.5	3.3	4.7
PPS 7	10.5	8.2	8.6	6.3	4.6	4.7	5.0
PPS 8	9.0	8.0	6.9	5.8	4.3	3.4	5.1
PPS 9	7.0	7.3	4.9	5.2	3.1	3.0	3.0
PPS 10	3.5	5.9	1.3	3.6	3.0	2.7	3.1
PPS 11	0.3	5.2	-1.3	3.5	2.4	2.0	2.6

Note: Data on costs, payments, and discharges for each PPS year (PPS 1, etc.) correspond to each hospital's cost reporting period beginning in that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Data on the market basket index, the update factor, and the consumer price index are from the corresponding Federal fiscal year (1984 for PPS 1, etc.). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. Changes are based on cohorts of hospitals with cost reports available in each of two consecutive years.

[a] Average update factor beginning with PPS 5 (fiscal year 1988). Update factor for PPS 7 (fiscal year 1990) adjusted for 1.22 percent across-the-board reduction in diagnois-related group weights.

[b] Increase in the average consumer price index for all urban consumers for the corresponding Federal fiscal year.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration and the Bureau of Labor Statistics.

Cost growth experience has not been uniform across hospitals. Through the seventh year of PPS, urban and rural hospitals had about the same rate of increase (see Table 3-4). In the first year, both groups reacted to prospective payment by holding their cost growth far below the rates prevailing before PPS, while annual cost increases in the second through the seventh years were much higher for both groups. From the eighth through the eleventh years, however, urban hospitals held their growth in costs per case to 2.7 percent annually, while rural hospital costs rose at a 3.9 percent rate.

The recent low rate of cost growth among hospitals in large urban areas may reflect the fact that the most rapid changes in the health care system appear to be occurring in the largest cities. In the eighth through eleventh PPS years, these hospitals' costs per case rose at an annual rate 1.1 percentage points below that for other urban hospitals and 1.6 points below that for rural hospitals. Similarly, large urban disproportionate share hospitals have experienced somewhat smaller cost increases than DSH hospitals in other areas.

The pattern of cost growth by ownership category is particularly interesting. In the first year of PPS, when hospitals perceived potential pressure to control costs, proprietary facilities had by far the smallest increase—only about one-fourth as great as any of the other groups. Once this pressure lessened, costs increased sharply through the seventh year for all groups, including the proprietary hospitals. However, from the eighth year on, these hospitals reined in their costs to a far greater extent than the other groups.

Trends in Capital Payments and Costs

Until fiscal year 1992, Medicare reimbursed hospitals for inpatient capital costs on the basis of their actual capital expenditures. Beginning that year, the program began paying for these costs using prospectively determined per case rates. The transition to a single capital rate is occurring over a 10-year period, during which payments reflect both hospital-specific costs and a single Federal capital payment rate. For fiscal year 1996, Medicare PPS payments for capital costs are estimated at $8.8 billion.

Table 3-4. Annual Change in PPS Operating Costs Per Case, by Hospital Group, First 11 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2 through PPS 7	PPS 8	PPS 9	PPS 10	PPS 11
All hospitals	1.8%	9.4%	6.9%	4.9%	1.3%	-1.3%
Urban	1.7	9.3	6.6	4.6	1.3	-1.5
Rural	1.6	9.1	8.4	6.1	1.8	-0.3
Large urban	0.6	9.1	6.0	3.8	1.7	-2.1
Other urban	3.2	9.7	7.5	6.0	0.7	-0.5
Rural referral	1.7	10.0	8.9	5.3	2.5	-0.6
Sole community	2.1	8.3	8.1	4.8	1.7	0.5
Other rural	1.3	8.9	8.2	6.8	1.6	-0.5
Major teaching	1.4	9.2	6.4	4.2	2.1	-1.8
Other teaching	1.3	9.2	6.6	4.9	1.2	-1.4
Non-teaching	2.0	9.4	7.1	4.8	0.9	-1.2
DSH:						
Large urban	-0.3	9.0	6.1	3.6	1.3	-2.2
Other urban	3.3	9.8	7.8	6.4	0.9	0.0
Rural	1.2	9.6	8.7	7.1	2.3	-0.9
Non-DSH	2.4	9.5	6.7	4.8	1.3	-1.5
Teaching and DSH	0.6	9.1	6.8	4.8	1.3	-1.5
Teaching only	2.8	9.4	6.2	4.8	2.1	-1.5
DSH only	1.8	9.5	7.4	5.0	0.9	-1.0
No teaching or DSH	2.0	9.4	6.9	4.7	0.9	-1.4
Voluntary	1.8	9.2	6.8	4.9	1.5	-1.1
Proprietary	0.5	10.0	5.5	3.5	-0.7	-4.1
Urban government	2.4	9.5	7.7	5.6	1.0	-1.7
Rural government	1.8	9.2	8.7	6.3	2.1	1.0

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. Changes are based on cohorts of hospitals with cost reports in each of two consecutive years. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Until the transition is completed in fiscal year 2002, hospitals will be paid using either a fully prospective method or a "hold-harmless" method. The choice depends on a comparison of the hospital-specific rate for each facility and its adjusted Federal payment rate. The hospital-specific payment rate is a facility's updated 1989 Medicare-allowable inpatient capital cost per discharge. The Federal rate is the updated 1989 nationwide average Medicare cost per discharge. This rate is adjusted for factors reflecting the hospital's location as well as its teaching and disproportionate share status, and for the relative costliness of the case (the DRG weight). Low-cost hospitals—those with a 1992 hospital-specific rate below their adjusted Federal rate—are paid under the fully prospective method; others are paid under the hold-harmless method, reflecting both the costs of their undepreciated capital and the Federal rate.

Under the fully prospective method, payments are a blend of the hospital-specific and Federal rates. In fiscal year 1996, payments to hospitals under this method are based on 50 percent of the hospital-specific rate and 50 percent of the Federal rate. Per case payments to hospitals reimbursed under the hold-harmless method will equal the Federal rate or a blend of payments for old and new capital, whichever is greater.[6] As a hospital's capital depreciates, its share of old capital declines and

its total payment per case eventually equals the Federal rate.

In fiscal year 1996, more than 20 percent of capital payments will be made to hospitals covered by the hold-harmless method (about one-sixth of all facilities). About 80 percent of payments will go to hospitals paid under the fully prospective method or paid entirely under the Federal rate. As expected, the share paid using the hold-harmless method is declining while the shares paid under the fully prospective and fully Federal rates are increasing as the transition progresses.

As with payment for operating expenses, capital rates are updated annually. During the first four years of prospective capital payment, however, rates per case were adjusted so that total payments equaled 90 percent of estimated Medicare-allowed capital costs. In fiscal year 1996, this budget neutrality requirement was lifted. Though historical cost increases initially were used to increase the Federal and hospital-specific rates, this approach has been replaced by an update framework that determines payment rate growth directly.

Capital payments have always been a relatively small share of total PPS payments, ranging from a low of 8.1 percent in the first year of PPS to a high of 9.2 percent in the ninth year (see Table 3-5). Historically, capital costs were fully reimbursed on a passthrough basis, that is, payments were equal to costs. In OBRA 1986 and OBRA 1990, the Congress implemented a series of capital payment reductions, starting at 3.5 percent in 1987 and rising to 15.0 percent in 1991. This set payments at 85 percent of costs. When prospective payment for capital began, the budget neutrality requirement kept capital payments at 90 percent of total anticipated costs. However, anticipated costs are forecasts that do not necessarily equal actual costs, and the requirement did not apply to each facility's payments. When the provision for budget neutrality expired at the end of September 1995, the Federal rate increased 22.6 percent and the average hospital-specific rate rose 21.1 percent for fiscal year 1996.

The capital payment to cost ratio has reflected these policy changes over time. In the first two years of PPS, payments equaled costs, resulting in a payment to cost ratio of 100 percent. Implementation of the capital reductions then gradually lowered payments relative to costs. The start of capital prospective payment in the ninth year of PPS increased payments in two ways. First, reimbursement was based on 90 percent of anticipated costs, rather than 85 percent of actual costs. Second, anticipated costs were overestimated. This led to a payment to cost ratio of 96.7 percent in the ninth year of PPS. The budget neutrality provision kept payments below costs in the following two years. For fiscal year 1996, when the end of the budget neutrality policy led to increases of 22.6 percent in the Federal rate and 21.1 percent in the hospital-specific rates, capital payments are estimated to be well above costs.

Table 3-5. PPS Capital Payments: Share of Total PPS Inpatient Payments, Payment to Cost Ratio, and Net Payments, First 11 Years of PPS

Year	Share of Total PPS Inpatient Payments	Payment to Cost Ratio	Net Payments as a Percentage of Total PPS Inpatient Payments*
PPS 1	8.1%	100.0%	0.0%
PPS 2	8.7	100.0	0.0
PPS 3	9.1	99.4	-0.1
PPS 4	9.0	97.5	-0.2
PPS 5	8.5	90.2	-0.9
PPS 6	8.6	88.0	-1.2
PPS 7	8.3	87.4	-1.2
PPS 8	8.4	87.6	-1.2
PPS 9	9.2	96.7	-0.3
PPS 10	9.0	91.3	-0.9
PPS 11	8.6	91.7	-0.8

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6.

* Net payments are total payments minus costs.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

PPS Margins

The effect of Medicare prospective payment on hospital financial performance can be measured by two different PPS margins. The PPS operating margin compares PPS operating payments and the Medicare-allowable operating costs of the services they are intended to cover. Basically, this margin is the difference between operating payments and

costs as a percentage of operating payments. A more comprehensive measure of financial performance, however, is provided by the PPS inpatient margin. This margin compares PPS operating and capital payments to total Medicare-allowable operating and capital costs. The trend in PPS operating margins reflects changes in operating payment policy and hospital operating cost growth. The trend in PPS inpatient margins reflects these factors as well as changes in capital payment policy (including the transition to a single Federal rate) and growth in hospital capital costs.

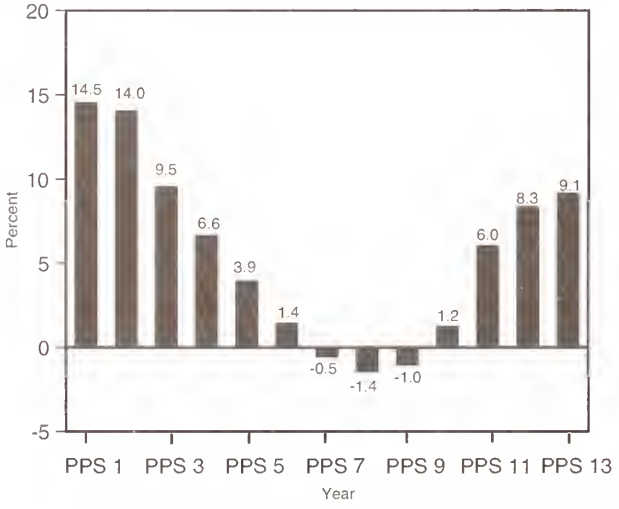
Trends in PPS Operating and PPS Inpatient Margins—In the eleventh year of PPS (the most recent year for which data are available), the aggregate PPS operating margin rose for the third consecutive year to 6.0 percent (see Figure 3-2). This contrasted with a declining trend from the first through the eighth years, during which the PPS operating margin fell to a low of −1.4 percent. The turnaround is attributable to the sharp slowdown in hospital cost growth. If current trends continue, the aggregate PPS operating margin for the thirteenth year of PPS would rise to 9.1 percent.

In the early years of PPS, the inflated payment rates resulting from the use of unaudited cost report data and unexpectedly large CMI increases, combined with the cost-control measures undertaken in anticipation of the new system, produced extremely high PPS operating margins. In response to these unexpectedly high margins, the Congress kept the PPS updates low for several years; costs climbed at their previous pace, and consequently operating margins began to fall.

By the seventh year, the cumulative increase in operating costs per discharge had exceeded the combined payment increases, and the aggregate margin fell below zero. By then, decreases in the margin had been at least 2 percentage points for five successive years. Starting in the eighth year, as operating cost increases began to moderate, the operating margin stabilized and then increased.

The pattern of year-to-year change in inpatient (operating plus capital) margins followed the same general trend as that for operating margins (see Figure 3-3). Operating payments and costs dominate the inpatient margin, because they account for about 90 percent of inpatient payments and costs. The inpatient margin tends to be lower than the operating margin, however, because capital payments tend to be lower relative to costs than operating payments are. The two margins were closest in the ninth year of PPS, when high prospective capital payment rates were implemented. In the current year, with the end of the budget neutrality requirement leading to large

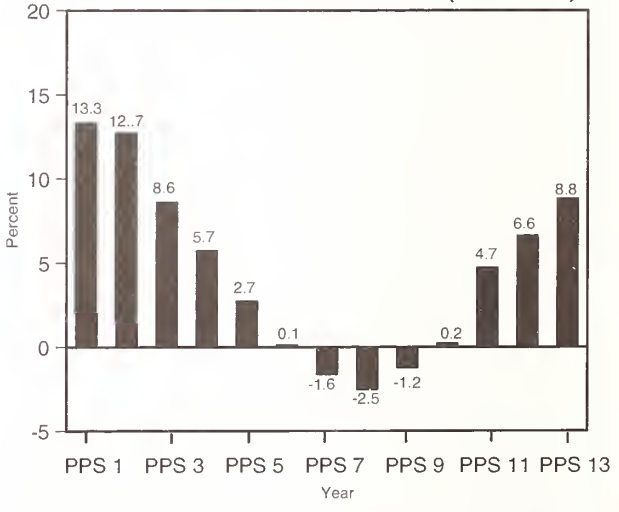
Figure 3-2. Aggregate PPS Operating Margin, First 13 Years of PPS (In Percent)



Note: Values are estimated for PPS 12 and PPS 13.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Figure 3-3. Aggregate PPS Inpatient Margin, First 13 Years of PPS (In Percent)



Note: The PPS inpatient margin reflects capital as well as operating payments and costs. Values are estimated for PPS 12 and PPS 13.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

capital payment rate increases, the gap between the two margins is expected to narrow considerably.[7]

Inpatient margins were down from their initial level for every hospital group through the seventh year (see Table 3-6). The inpatient margin for urban hospitals was 14.3 percent in the first year—exceeding that for rural hospitals by 6.6 percentage points. As margins fell from their early highs, the urban/rural disparity was seen as a threat to the viability of rural facilities.[8] Beginning in fiscal year 1986 (the third year of PPS), the Congress enacted a series of policy changes designed to increase payment for rural hospitals. By the fifth year, although the difference between the two groups had decreased to 4.6 percentage points, rural hospitals had negative margins while urban ones were still receiving payments that exceeded their costs. The disparity narrowed to 0.4 percentage points by the ninth year.

Changes in payment policy have continued to favor rural over urban hospitals, but urban facilities have gained greater control over their costs. From the eighth through eleventh year of PPS, urban hospitals' costs per case grew about 1 percentage point per year more slowly than those of rural hospitals, as discussed above. As a result, PPS inpatient margins for urban hospitals rapidly increased, exceeding those for rural facilities by 4.8 percentage points in the eleventh year.

Major teaching hospitals still have the highest aggregate inpatient margin of any hospital group. Moreover, the difference in the margins for major teaching and non-teaching hospitals has widened.

Table 3-6. PPS Inpatient Margin, by Hospital Group, First 11 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2	PPS 3	PPS 4	PPS 5	PPS 6	PPS 7	PPS 8	PPS 9	PPS 10	PPS 11
All hospitals	13.3%	12.7%	8.6%	5.7%	2.7%	0.1%	-1.6%	-2.5%	-1.2%	0.2%	4.7%
Urban	14.3	13.6	9.6	6.6	3.3	0.6	-1.3	-2.3	-1.2	0.4	5.4
Rural	7.7	7.3	2.2	0.2	-1.3	-2.9	-3.8	-3.8	-1.6	-1.0	0.6
Large urban	15.0	13.5	9.8	6.6	3.0	0.4	-0.8	-1.5	0.1	1.9	7.3
Other urban	13.4	13.7	9.3	6.6	3.6	0.9	-2.0	-3.5	-3.2	-1.9	2.3
Rural referral	9.5	12.4	7.9	5.5	3.3	0.5	-1.1	-1.5	1.4	0.6	3.1
Sole community	8.2	6.5	2.0	0.4	-1.3	-2.6	-1.0	-0.6	2.8	4.4	5.5
Other rural	7.0	5.9	0.1	-2.0	-3.2	-4.4	-5.8	-5.9	-4.4	-3.8	-2.5
Major teaching	18.1	18.1	14.9	12.5	10.3	7.2	7.1	7.5	8.8	10.1	15.6
Other teaching	14.8	14.6	10.4	7.2	3.8	1.5	-0.9	-2.1	-1.3	0.3	4.8
Non-teaching	11.2	10.0	5.2	2.5	-0.7	-3.3	-5.2	-6.4	-5.0	-3.7	0.4
DSH:											
Large urban	15.4	13.7	10.3	8.1	5.7	3.4	3.1	2.9	4.8	7.1	12.8
Other urban	13.4	14.3	10.1	7.9	5.2	2.5	0.1	-1.3	-1.1	0.3	4.4
Rural	8.3	8.7	3.4	0.9	-0.2	-2.4	-3.3	-2.9	-1.2	-1.4	0.7
Non-DSH	12.4	11.6	7.1	3.5	-0.5	-3.1	-5.6	-6.8	-5.6	-4.6	-0.6
Teaching and DSH	15.9	15.6	12.1	10.0	7.8	5.3	4.3	3.8	4.8	6.6	11.7
Teaching only	15.3	15.6	11.3	6.7	1.9	-0.7	-3.5	-4.2	-3.2	-2.3	2.0
DSH only	11.5	10.7	6.0	3.6	0.9	-1.6	-3.1	-4.0	-2.4	-0.8	3.5
No teaching or DSH	10.9	9.4	4.5	1.5	-2.0	-4.6	-6.9	-8.5	-7.2	-6.2	-2.2
Voluntary	13.8	13.4	9.4	6.4	3.1	0.7	-1.4	-2.5	-1.4	-0.1	4.1
Proprietary	13.0	11.2	6.6	3.7	0.0	-3.7	-5.4	-4.3	-1.9	1.0	8.7
Urban government	13.0	12.7	8.1	6.2	4.9	1.9	2.2	1.1	1.9	3.7	9.4
Rural government	6.6	4.9	-0.8	-2.6	-2.7	-4.1	-4.5	-4.7	-2.9	-2.8	-2.7

Note: The PPS inpatient margin reflects capital as well as operating payments and costs. Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

For major teaching hospitals, the inpatient margin fell from 18.1 percent in the first year of PPS to a low of 7.1 percent in the seventh year, while the drop for other teaching and non-teaching hospitals was much sharper. By the eleventh year, all three groups had higher margins, with the largest increase seen in the major teaching group. Their margin was 15.6 percent—10.8 percentage points higher than for other teaching hospitals and 15.2 percentage points higher than for the non-teaching group. These differences had been 3.3 percentage points and 6.9 percentage points, respectively, in the first PPS year.

The DSH adjustment also appears to have affected inpatient margins, especially for DSH hospitals in large urban areas. These hospitals had a margin of 12.8 percent in the eleventh year, compared with 4.4 percent for other urban DSH hospitals and −0.6 percent for hospitals that did not get this adjustment.

Hospitals receiving both IME and DSH payments—including most major teaching hospitals—had an aggregate inpatient margin of 11.7 percent in the eleventh year. This compares with 2.0 percent for hospitals receiving only teaching payments and 3.5 percent for those receiving only DSH payments. Hospitals that got neither adjustment had a margin of −2.2 percent.

The trend in inpatient margins by ownership category also reflects changes in payment policy and degree of success in controlling costs. In the first year, voluntary, proprietary, and urban government hospitals all had inpatient margins between 13 percent and 14 percent, while rural government hospitals lagged behind. In the seventh year, the inpatient margin for the proprietary group, which had fallen by more than 18 percentage points since the beginning of PPS to −5.4 percent, was the lowest of the four groups. However, as these hospitals held down their cost growth, their margin increased by 14 percentage points, to 8.7 percent in the eleventh year of PPS.

Distribution of PPS Inpatient Margins—During the first two years of PPS, when margins generally were high and Medicare paid capital costs on a passthrough basis, payments covered Medicare inpatient costs for all but a few hospitals. However, as the inpatient margin fell in subsequent years and more hospitals experienced financial pressure under prospective payment, the distribution of margins became increasingly important. By the eighth year of PPS, about three of every five hospitals had a negative margin compared with fewer than one of five in the first year (see Table 3-7). In the ninth through eleventh years, the proportion of hospitals with a negative value fell below 50 percent.

The range of inpatient margins has also grown substantially since the start of PPS. In the first year, half of all PPS hospitals had inpatient margins ranging from 3.0 percent to 16.2 percent—about a 13-percentage-point spread. By the eleventh year, this range had grown to more than 22 points.

The distribution of inpatient margins within each hospital group was also very wide (see Table 3-8). A quarter of all urban facilities had inpatient margins of −8.9 percent or lower in the eleventh year, while margins for another quarter were 12.6 percent or higher. The range was even greater for rural facilities. In large urban areas, more than three-fifths of all hospitals had positive margins, while in other urban and rural areas a greater proportion had negative values. Most sole community hospitals and rural referral centers had margins above zero.

Among major teaching hospitals, the distribution of inpatient margins was consistently high relative to other groups. Only 10.3 percent of these facilities had negative margins, and most were considerably higher than the typical non-teaching hospital. Disproportionate share hospitals (which substantially overlap with the major teaching group) tended to have above-average margins across the board, even though Medicare costs substantially exceeded PPS payments for some of these facilities in rural and other urban areas. Hospitals receiving neither teaching nor DSH payments performed worse than almost any other group.

One in four rural government hospitals had a margin above 9.8 percent, but an equal number were below −15.2 percent. About 55 percent had negative margins. Urban government hospitals had an even wider range, but fewer of them had negative margins. The median for proprietary hospitals was almost 6.4 percentage points higher than that for all hospitals, and almost two-thirds of this group had positive margins.

Table 3-7. Distribution of PPS Inpatient Margins and Percentage of Hospitals With Negative Margin, First 11 Years of PPS

Year	Percentile					Percent With Negative Margin
	10th	25th	Median	75th	90th	
PPS 1	-6.1%	3.0%	10.3%	16.2%	21.4%	18.3%
PPS 2	-8.7	1.2	9.1	15.9	22.1	22.1
PPS 3	-16.0	-4.4	4.5	11.7	18.0	35.6
PPS 4	-19.4	-7.1	2.5	10.3	17.3	42.5
PPS 5	-23.5	-10.1	0.4	9.2	17.4	48.7
PPS 6	-25.4	-12.3	-1.8	7.7	16.1	55.1
PPS 7	-26.5	-13.8	-3.4	6.5	15.5	59.3
PPS 8	-27.9	-15.5	-4.6	5.7	14.9	61.6
PPS 9	-27.2	-14.6	-2.9	7.5	16.6	57.7
PPS 10	-25.2	-13.0	-1.3	9.0	19.0	53.3
PPS 11	-23.1	-10.2	1.2	12.0	22.5	46.9

Note: The PPS inpatient margin reflects capital as well as operating payments and costs. Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

OTHER MEDICARE PAYMENTS TO HOSPITALS

In addition to PPS operating and capital payments, hospitals receive substantial revenue from Medicare for other activities, including graduate medical education and outpatient services. Payments to PPS-excluded facilities and distinct-part units also account for a large share of Medicare hospital payments.

Medicare Direct Graduate Medical Education Payments

Medicare's payments to hospitals include funding to support the training of interns and residents, nurses, and allied health professionals. In fiscal year 1996, Medicare will pay about $2.0 billion to hospitals for the direct costs of training interns and residents through a prospective hospital-specific per resident payment. These payments for direct graduate medical education (GME) costs are in addition to payments made under the IME adjustment. Another $300 million will be paid for the direct costs of hospital-based nursing and allied health professions training programs.

When PPS was implemented, the costs of residency training programs (salaries and benefits for residents and faculty, classroom costs, and associated overhead) were reimbursed on a reasonable cost basis. The Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) created a prospective hospital-specific per resident payment for these costs. Based on each hospital's average reported per resident costs from the first year of PPS, the payment amount is updated annually by the increase in the consumer price index (CPI) for all urban consumers.

The COBRA legislation counted residents as half a full-time equivalent (FTE) employee if they were more than a year beyond their initial residency period (the minimum amount of training required to become board-certified) or if they had more than five years of training. (Residents in geriatric residencies or fellowships receive a full weight of 1.0 for two years beyond their initial residency period.) Medicare's responsibility for graduate medical education payment is based on the Medicare share of inpatient days. Total Medicare GME payments for a hospital equal the updated per resident payment amount, multiplied by the weighted FTE count of residents and then by Medicare's share of inpatient days in the hospital.

Further payment changes occurred under OBRA 1993, which created separate hospital-specific payment rates for primary care and non-primary care residents. Rates for primary care residents were updated, while those for other

Table 3-8. Distribution of PPS Inpatient Margins and Percentage of Hospitals With Negative Margin, by Hospital Group, PPS 11

Hospital Group	Percentile			Percent With Negative Margin
	25th	Median	75th	
All hospitals	-10.2%	1.2%	12.0%	46.9%
Urban	-8.9	2.3	12.6	43.9
Rural	-12.2	-0.2	11.2	50.4
Large urban	-7.1	4.2	15.0	39.5
Other urban	-10.2	0.3	10.2	49.4
Rural referral	-6.9	1.3	10.8	45.9
Sole community	-8.5	4.3	16.2	40.5
Other rural	-14.6	-2.1	9.6	55.0
Major teaching	7.2	17.5	25.5	10.3
Other teaching	-6.6	3.2	12.5	39.9
Non-teaching	-11.8	-0.2	10.7	50.4
DSH:				
Large urban	-0.4	10.9	21.9	25.5
Other urban	-5.4	3.2	12.1	41.0
Rural	-11.4	2.0	15.5	47.0
Non-DSH	-13.0	-1.2	9.2	53.1
Teaching and DSH	0.6	10.1	20.7	23.9
Teaching only	-10.9	0.4	10.0	49.1
DSH only	-8.4	3.7	14.6	43.0
No Teaching or DSH	-13.4	-1.5	9.1	53.6
Voluntary	-10.1	1.1	11.1	47.2
Proprietary	-4.9	7.6	18.7	33.8
Urban government	-8.6	3.5	16.6	43.7
Rural government	-15.2	-1.8	9.8	55.2

Note: The PPS inpatient margin reflects capital as well as operating payments and costs. Excludes hospitals in Maryland. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

residents were frozen in fiscal years 1994 and 1995. In addition, OBRA 1993 again reduced payment for subspecialty residents by counting all residents beyond their initial residency period (rather than just those one year beyond eligibility) as half an FTE, although the special treatment of geriatric residencies was retained and extended to preventive care residencies. The new weighting scheme means that subspecialty residents in fields like cardiology are now counted as half an FTE throughout their training.

In fiscal year 1995, the average per resident payment amount was about $65,000.[9] The amount varied, however, from less than $20,000 to well over $120,000. This variation reflects 1984 base-period costs and could be due to actual differences in training program costs or hospital cost-reporting practices.

Medicare GME payments are affected by the total number of residents training in approved programs, which has escalated in recent years. The American Association of Medical Colleges reports 103,640 residents in the 1994–1995 academic year, a 1.4 percent increase from the previous year and a rise of more than 5 percent since 1992–1993.[10] Growth has been especially rapid among residents who attended medical schools located outside the United States and Canada, most of whom are citizens of other countries. The total number of graduates from these schools went up almost 22 percent, and the number who are not U.S. citizens climbed almost 36 percent between the 1992–1993 and 1994–1995 academic years.

Medicare payment policy may have helped stimulate the overall growth in residents. In 1993, the annual Medicare subsidy for each additional resident in the initial residency period—including both IME and GME payments—was about $80,000, according to the Congressional Budget Office.[11] However, this amount varied among teaching hospitals; a quarter had subsidies of less than $58,000 and a quarter received over $102,000. Subsidies for residents beyond their initial residency period were less, but they still exceeded $86,000 for a quarter of all teaching hospitals. By contrast, third-year resident stipends and fringe benefits cost hospitals much less: Among the middle half of all teaching hospitals, these stipends ranged from $35,800 to $41,000. Thus, adding a resident may increase a hospital's total Medicare teaching payments by substantially more than the direct salary and benefit costs it incurs. Since new residents also provide patient care services to the hospital, there is a strong incentive to hire more of them—and the only source of additional residents is from medical schools outside the United States.

As noted earlier, Medicare also provides funds for hospital-based nurse education and allied health professions training programs. In fiscal year 1996, Medicare will pay hospitals about $300 million for the classroom and clinical training costs of these programs. Payment is made on a reasonable cost basis, and programs must be hospital-based or have a written agreement with a hospital to be eligible for funding. The support goes primarily to diploma nursing schools. Once the training ground for most nurses, these programs are rapidly disappearing: Between 1960 and 1994, the share of nurses graduating from hospital programs fell from 80 percent to 8 percent.[12] Although specialists in nursing have long encouraged the ongoing shift to nursing education in colleges and universities at both the undergraduate and graduate levels, Medicare funding continues to focus on the shrinking diploma school sector.

Medicare Payment for Hospital Outpatient Services

In fiscal year 1996, payments for Medicare-covered hospital outpatient services are expected to be $23.2 billion. The Medicare program will pay $14.0 billion of this total; Medicare beneficiaries will pay $9.2 billion. Outpatient services contribute a growing share of total hospital revenues and the payments hospitals receive from Medicare.

For most hospital-provided ambulatory surgeries, Medicare pays the lesser of costs, charges, or a blended payment amount. The blended amount combines a portion of the hospital's costs or charges (whichever is lower) with a portion of the prospective rate that would have been paid had the surgery been performed in a free-standing ambulatory surgical center. Radiology and selected diagnostic services are paid using the same method. For these services, the prospective payment amount in the blended formula is based on a portion of the appropriate Medicare physician fee schedule amount.

Laboratory services are paid using a prospective fee schedule. Some nonsurgical procedures, among them ambulance services, emergency room visits, and physical, speech, and occupational therapy services, are paid under the lesser of reasonable costs or the provider's customary charge. Rural primary care hospitals can choose between two payment methods for outpatient services, one based on facility costs and professional charges and the other on an all-inclusive rate (combining facility and professional medical services).

Under current Medicare policies, payments for most outpatient services increase when costs rise. Because this gives facilities limited incentives to control costs, the Congress has mandated that Medicare develop a prospective payment system for outpatient services. At the Congress's request, the Secretary of Health and Human Services has submitted a proposal for phasing in such a system.[13] The proposed system would begin with ambulatory surgery, radiology, and other diagnostic services provided in hospital outpatient departments.

The Secretary's proposal was for a partial outpatient prospective payment system with extensions and refinements over an indefinite period in the future. About one-half of Medicare's outpatient payment would still be made using cost-based methods. Incentives and opportunities would exist for providers to alter billing and cost-allocation practices to increase revenue. As a result, such phased implementation would saddle hospitals and HCFA with the costs of adopting a new payment

system without the benefits of added simplicity or cost control. Without steps to control outpatient volume, aggregate expenditures on prospectively paid services would continue to increase.[14]

Medicare Payments for PPS-Excluded Hospitals and Distinct-Part Units

When PPS was established, prospective payment could not be applied to certain providers. Because DRGs fail to predict these providers' resource costs accurately, they were excluded from PPS. Five types of specialty hospitals (psychiatric, rehabilitation, long-term care, children's, and cancer) and two types of distinct-part units in general hospitals (psychiatric and rehabilitation) are exempt from PPS.

PPS-excluded hospitals and distinct-part units are subject to the payment limitations and incentives established by the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). Each provider is paid on the basis of its current Medicare-allowable inpatient operating costs per discharge or a target amount, whichever is lower. The target amount is based on the provider's allowable costs per discharge in a base year, trended to the current year by an annual update factor.

Under TEFRA, a facility with Medicare-allowable inpatient operating costs below its ceiling (the target amount times the number of discharges) receives its costs plus 50 percent of the difference between these costs and the ceiling or 5 percent of the ceiling, whichever is less. A facility with inpatient operating costs above the ceiling receives its ceiling plus 50 percent of the difference between its ceiling and its costs, up to 110 percent of the ceiling. An exceptions process is available through which payments may be adjusted under certain circumstances.

Hospitals and units excluded from PPS are expected to receive about $12.5 billion in fiscal year 1996. Approximately half will go for services at distinct-part units in hospitals that also receive PPS payments for acute care services.

DETERMINANTS OF HOSPITAL COSTS

Many factors combine to determine the aggregate costs of hospital care, by influencing either the volume of hospital services or service unit costs. This section discusses some of the most important of these factors: inpatient and outpatient utilization, bed capacity, employment levels and labor productivity, and the costs of non-labor inputs.

Utilization and Capacity

The volume of inpatient admissions dropped steeply during the first three years after the implementation of PPS, and smaller reductions continued through 1992 (see Table 3-9).[15] Moreover, the effect of this decline in admissions on total patient day volume was magnified by the average length of hospital stays decreasing by 0.6 days, mostly between 1983 and 1985. Since 1992, admissions volume has gone up each year, rising 1.4 percent in 1995 alone, while length of stay has continued to fall. The 0.7 day drop in length of stay over the past three years has been more than enough to offset the admissions increase, resulting in a reduction in total patient days averaging 2.7 percent annually. Since 1981, patient day volume has gone down by more than 30 percent.

The number of hospital beds in the country has fallen every year for the last decade, despite the increase in population. However, the annual decline of just over 1 percent has been less than half the drop in inpatient days. This has resulted in a steady reduction in average occupancy, from about 72 percent in 1983 to less than 60 percent in 1995.

By contrast, the volume of hospital outpatient visits has grown at an accelerating rate since the early 1980s. The annual increase averaged 5.3 percent between 1984 and 1992, and since then has risen each year, reaching 8.3 percent in 1995. The 1995 increase was the largest in 20 years, which is particularly noteworthy since it occurred in tandem with an unusually large upswing in inpatient admissions. Adjusted admissions (a measure combining admissions and outpatient visits) therefore also registered an unusually large rise in 1995. However, the growth in admissions and adjusted admissions has been inflated for several years by substantial expansion of hospital-based long-term care units. In 1994, for example, long-term care unit admissions rose 15 percent.[16]

Changes in Hospital Employment

The number of full-time equivalent workers employed by hospitals was growing substantially

Table 3-9. Hospital Use, Beds, and Occupancy, 1981-1995

Year	Change in Admissions	Length of Stay (In Days)	Change in Inpatient Days	Change in Beds	Occupancy Rate	Change in Outpatient Visits	Change in Adjusted Admissions
1981	0.9%	7.2	1.2%	1.7%	75.8%	1.4%	1.1%
1982	0.0	7.2	-0.6	1.1	74.5	1.1	0.3
1983	-0.5	7.0	-2.5	0.6	72.2	2.8	0.0
1984	-3.7	6.7	-8.6	1.1	66.7	1.4	-2.5
1985	-4.9	6.5	-6.5	-1.8	63.6	4.5	-2.8
1986	-2.1	6.6	-1.4	-1.2	63.4	8.3	-0.3
1987	-0.6	6.6	0.2	-0.9	64.1	5.8	0.9
1988	-0.4	6.6	-0.5	-1.3	64.6	6.2	1.4
1989	-1.0	6.6	-0.9	-1.3	64.9	4.0	0.5
1990	-0.5	6.6	-1.6	-0.9	64.5	6.0	1.5
1991	-1.1	6.5	-2.5	-1.0	63.5	5.4	1.1
1992	-0.8	6.4	-2.4	-0.5	62.3	6.4	1.1
1993	0.7	6.2	-2.1	-0.7	61.4	6.5	2.0
1994	0.9	6.0	-2.9	-1.2	60.3	7.0	2.9
1995	1.4	5.7	-2.9	-1.8	59.7	8.3	3.5
Averages							
1981-1983	0.1	7.1	-0.6	1.1	74.2	1.8	0.5
1984-1992	-1.7	6.6	-2.7	-1.1	64.2	5.3	0.1
1993-1995	1.0	6.0	-2.7	-1.2	60.5	7.3	2.8

Note: Adjusted admissions are the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission.

SOURCE: American Hospital Association National Hospital Panel Survey.

shortly before PPS was implemented (see Table 3-10). This resulted in a decline in labor productivity, as measured by adjusted admissions per FTE, averaging 2.9 percent annually. Largely in reaction to PPS, the industry reduced its employment by 2.3 percent in both 1984 and 1985, but since the aggregate patient load also dropped significantly, labor productivity still fell slightly during this period. The period between 1986 and 1992 was characterized by small employment increases and productivity declines.

The last three years have seen a dramatic turnaround in productivity as hospitals responded to greater competition in the private market. Employment rose in 1993, but this was more than offset by higher patient volume. In 1994, the number of employees was reduced for the first time in a decade and labor productivity climbed by 3.7 percent. This performance was then surpassed in 1995, with employment dropping 1.4 percent and productivity increasing by 5.0 percent.

Before 1993, gains in measured hospital labor productivity had occurred only three times over the 30 years for which data are available, with the largest increase being only 0.8 percent. Thus, the industry has achieved a record level of productivity improvement in each of the last three years. However, it is important to remember that restricting the measurement to labor inputs inevitably overstates the overall level of productivity gain due to the substitution of other inputs (capital, contract services, and so forth) for labor over time. A previous ProPAC analysis documented a smaller increase or a larger decline in productivity every year from 1984 through 1993 when the use of non-labor inputs was reflected in the measurement.[17] In addition, as with most productivity analyses, the data used here are not adjusted for any changes in the quality of care. To the extent that higher employment has a favorable effect on quality, the true productivity gains over the last two years probably were smaller than the figures suggest and the productivity declines of previous years probably were less severe.

In addition to curbing the size of their labor force, hospitals have made substantial progress in controlling

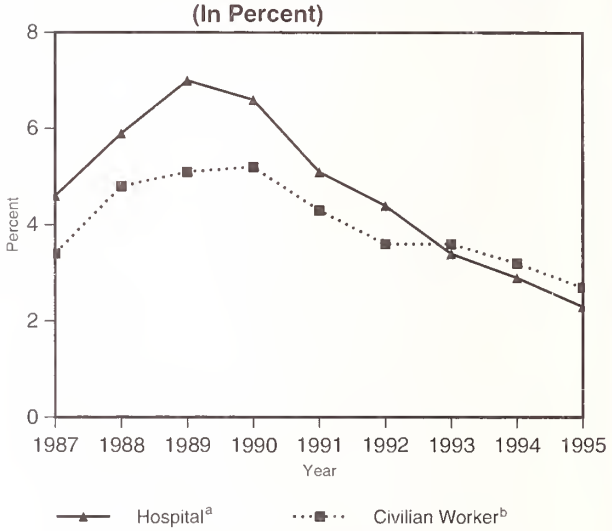
Table 3-10. Change in Hospital Employment and Labor Productivity, 1981-1995 (In Percent)

Year	Full-Time Equivalents	Adjusted Admissions Per FTE
1981	5.4%	-4.1%
1982	3.7	-3.3
1983	1.4	-1.3
1984	-2.3	-0.2
1985	-2.3	-0.6
1986	0.3	-0.7
1987	0.7	0.2
1988	1.1	0.3
1989	1.6	-1.1
1990	2.1	-0.6
1991	0.6	0.4
1992	1.6	-0.4
1993	0.7	1.3
1994	-0.8	3.7
1995	-1.4	5.0
Averages		
1981-1983	3.5	-2.9
1984-1992	0.4	-0.3
1993-1995	-0.5	3.3

Note: Adjusted admissions per FTE measures labor productivity. Adjusted admissions are the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission. FTE = full-time equivalent.

SOURCE: ProPAC analysis of data from the American Hospital Association National Hospital Panel Survey.

Figure 3-4. Change in Hospital and Civilian Worker Compensation, 1987-1995 (In Percent)



Note: All changes are from the index level at the previous year's end. Compensation includes wages and benefits.

[a]Based on employment cost index compensation series for hospital workers.

[b]Based on employment cost index compensation series for all civilian workers.

SOURCE: Bureau of Labor Statistics.

their annual compensation rate hikes. Before 1993, the average increase for hospital workers exceeded the average for all civilian workers at least as far back as 1987, when comparable data first became available (see Figure 3-4). Since then, however, hospital workers have consistently received below-average increases. Moreover, the reduction in wage and benefit growth has been even steeper when the measurement is limited to voluntary and proprietary hospitals. Government hospitals granted increases averaging nearly a full percentage point higher than non-government institutions in 1994 and 1995, possibly indicating the influence of multiyear union contracts or governmentwide personnel policies.

Costs of Capital, Services, and Supplies

There are three broad types of non-labor inputs: capital assets, supplies, and services. Capital assets include buildings, fixtures like elevators and sterilizers, and movable equipment such as magnetic resonance imaging machines and floor polishers. The costs associated with these assets are measured as interest on funds borrowed to purchase them and depreciation. Supplies encompass a broad range of items ranging from intravenous fluids to needles to paper products. And services, which normally are considered together with supplies, meet such diverse needs as insurance, medical equipment maintenance, temporary nurse staffing, and even the operation of entire departments by outside contractors.

The costs of both capital assets and supplies and services have generally grown faster than labor costs (see Table 3-11). Capital cost growth rates were particularly high in the years prior to the implementation of PPS for operating costs—averaging nearly 20 percent annually. Then, for several years in the late 1980s and early 1990s, the annual increase in capital costs was slightly below that for labor. Finally, as hospitals reduced both their employment levels and wage increases beginning in 1993, capital costs once again grew at a faster pace. While the difference was only 1.5 percentage points per year from 1993 to 1995, lower overall cost growth has meant that the increase in capital costs was 60 percent higher than that for labor. One

Table 3-11. Change in Hospital Costs Per Adjusted Admission, by Component, 1981-1995 (In Percent)

Year	Labor	Capital Assets*	Services and Supplies
1981	17.9%	19.0%	16.3%
1982	15.8	20.4	14.2
1983	9.4	17.1	10.2
1984	6.4	21.6	6.4
1985	7.7	15.3	10.9
1986	7.7	11.5	11.4
1987	8.2	10.6	11.1
1988	8.6	8.1	8.9
1989	9.4	9.3	9.3
1990	9.5	8.7	9.6
1991	8.1	6.6	10.2
1992	7.6	7.2	9.1
1993	4.8	4.9	4.7
1994	1.8	3.3	2.1
1995	1.0	3.6	2.6
Averages			
1981-1983	14.3	18.8	13.5
1984-1992	8.1	10.9	9.6
1993-1995	2.5	4.0	3.1

Note: Adjusted admissions are the sum of inpatient admissions and an estimate of the volume of outpatient services. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission.

* The costs associated with capital assets are measured as interest on funds borrowed to purchase them plus depreciation.

SOURCE: ProPAC analysis of data from the American Hospital Association National Hospital Panel Survey.

possible contributor to the steeper growth rate for capital may be expenditures related to building integrated networks—the purchasing of physician practices, buyouts of other organizations, development of ambulatory care treatment space, and so forth. Since 1983, supply and service costs have grown, on average, just over 1 percentage point a year more than labor costs.

Capital Financing

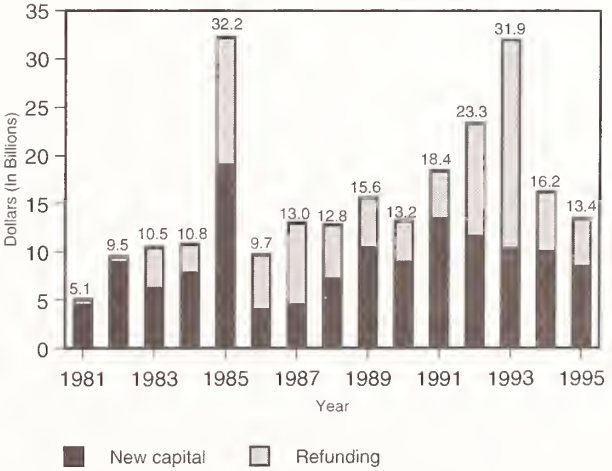
Hospitals obtain capital funds for new construction and for modernization of existing facilities from internal financing, borrowing, and philanthropy. Most borrowing is done by local or state authorities on behalf of hospitals, allowing bonds to be sold on the tax-exempt debt market at lower interest rates.

The annual volume of health care bonds, including issues for hospitals and nursing homes, has varied greatly over the last 16 years in response to policy and economic factors. In anticipation of tax law changes, borrowing stepped up in 1985 to $32 billion before returning to only $10 billion the following year (see Figure 3-5).[18] Responding to lower interest rates, borrowing climbed to $23 billion in 1992 and reached nearly $32 billion in 1993. As municipal bond interest rates rose again, bond volume plummeted by almost 50 percent to $16 billion in 1994 and by another 17 percent to $13 billion in 1995.

Between 1994 and 1995, bonds issued for refunding (essentially refinancing of outstanding debt at lower interest rates) fell by 28 percent, continuing the 1993-1994 trend and reflecting conditions in the overall municipal bond market. However, unlike the situation in 1994, the volume of bonds issued to raise new capital funds also declined.

Hospital access to capital markets depends on various factors, among them the facility's credit rating. A higher credit rating is usually associated with a lower interest rate and greater availability of capital financing. Credit ratings are based on factors such as the hospital's ability to adapt to its market, including its response to changes in payment systems and managed care activity, and its overall financial condition. Ratings are set by major credit rating agencies like Moody's and Standard and Poor's. In 1995, Standard and Poor's down-

Figure 3-5. Health Care and Nursing Home Tax-Exempt Municipal Bond Volume, 1981-1995 (In Billions)



SOURCE: Information for 1980 to1991 from Securities Data Co., Inc., and for 1992 to 1995 from *The Bond Buyer*.

graded 55 private nonprofit hospital bond issues totaling $1.9 billion and upgraded 63 issues totaling $2.4 billion. This represents a 0.87 to 1 ratio of downgrades to upgrades compared with 1.7 to 1 in 1994, suggesting either that the industry's financial condition was brighter or that the investment community perceived less risk in 1995.

Hospitals can improve their access to capital and lower their interest rates by making arrangements that reduce the risk of default. In 1995, 67 percent of health care bond issues had such credit enhancements, including 49 percent with bond insurance, 8 percent with letters of credit, and 7 percent with mortgage insurance. By contrast, 60 percent of issues on the overall municipal bond market, including those for schools, transportation facilities, and other public works, had these types of arrangements. The use of enhancements has been increasing for health care as well as for other municipal bond issues. It is not possible to determine whether their use by health care bond issuers is a response to greater perceived riskiness of health care investments or whether it simply reflects general behavior in the overall municipal bond market.

HOSPITAL REVENUES AND FINANCIAL PERFORMANCE

Hospital financial performance depends on revenues as well as costs. Most hospital revenue comes from payments for patients sponsored by public payers (chiefly Medicare and Medicaid) and private insurers. Small portions come directly from patients and from state and local governments in the form of operating subsidies; non-patient care activities also generate some funds. This section begins by discussing the trend in hospital revenues from inpatient and outpatient services, followed by a comparison of revenue and cost growth. Then both the trend and distribution of hospital total margins, which reflect revenues and costs from all sources, are presented.

Hospital Revenue Growth

The contribution of various hospital services to total revenue growth has changed over time (see Table 3-12). Although inpatient services still account for about two-thirds of hospital revenues, they have been declining as a share of the total by more than 1 percentage point annually since the early 1980s. Outpatient services, conversely, have more than doubled as a share of revenue during this period, while revenue from non-patient care sources has risen marginally.

The increase in outpatient revenue share is largely attributable to the rapid growth in outpatient visit volume and the drop in inpatient lengths of stay discussed earlier. But another contributing factor is that outpatient revenue per visit has risen more rapidly than inpatient revenue per admission in almost every year since 1980. The differential was particularly wide—averaging about 2.5 percentage points per year—between 1984 and 1991. A substantial volume of surgeries and complex diagnostic procedures was shifted from inpatient to outpatient settings during these years, facilitated by technological advances that made it feasible to perform many procedures on an ambulatory basis. This shift raised the average complexity—and therefore the price—of outpatient units of service. In addition, PPS reduced the growth in Medicare inpatient payments beginning in 1984, while outpatient payments continued to be largely unconstrained. Private payers also focused their cost-containment efforts primarily on inpatient care.

Trends in Hospital Expenses and Revenues— In the early 1980s, the real increase in expenses per adjusted admission (net of general price inflation) averaged more than 7 percent annually (see Figure 3-6). After a sharp deceleration in 1984 (the first year of PPS), hospital costs continued growing rapidly during the rest of the 1980s and into the early 1990s.

Throughout this period, hospital revenues per adjusted admission followed a remarkably similar track. From 1985 through 1992, while expenses per case rose between 2.8 percent and 6.0 percent more than inflation, revenues per case increased between 2.3 percent and 6.8 percent more. This indicates that, despite the rapid growth in costs, hospitals were able to generate the revenues necessary to cover those costs. In the 12 years from 1981 to 1992, real cost increases exceeded real revenue increases only in 1986, 1987, and 1988.

In recent years, the flow of revenues has been more limited. In 1993, revenues per adjusted admission rose by only 2.4 percent after inflation,

Table 3-12. Change in Hospital Revenue and Share of Revenue, by Source, 1981-1995 (In Percent)

Year	Inpatient Revenue Per Admission	Outpatient Revenue Per Visit	Total Revenue Per Adjusted Admission	Total Revenue	Source of Revenue		
					Inpatient	Outpatient	Other
1981	17.3%	19.2%	17.5%	18.9%	82.7%	12.7%	4.5%
1982	16.2	16.8	16.0	16.3	82.7	12.9	4.4
1983	10.4	11.5	10.2	10.2	82.4	13.4	4.2
1984	8.6	12.4	8.7	6.0	81.3	14.4	4.3
1985	8.9	13.2	9.2	6.1	79.3	16.1	4.6
1986	8.5	8.3	8.4	8.0	78.0	17.5	4.5
1987	8.9	10.7	9.0	10.0	76.8	18.6	4.6
1988	8.5	11.4	8.8	10.3	75.2	20.0	4.8
1989	9.4	11.5	9.6	10.1	74.0	21.0	4.9
1990	9.2	11.7	9.2	10.9	72.6	22.5	5.0
1991	9.3	12.0	9.2	10.3	71.1	24.0	4.8
1992	8.2	8.6	8.2	9.4	69.8	25.4	4.9
1993	4.9	3.8	5.0	7.1	68.9	26.2	5.0
1994	1.6	2.8	1.9	4.9	67.3	27.5	5.2
1995	1.3	1.4	1.5	5.0	65.8	28.8	5.5
Averages							
1981-1983	14.6	15.8	14.5	15.1	82.6	13.0	4.4
1984-1992	8.8	11.1	8.9	9.0	75.3	19.9	4.7
1993-1995	2.6	2.7	2.8	5.7	67.3	27.5	5.2

SOURCE: American Hospital Association National Hospital Panel Survey.

the smallest increase in more than a decade. Hospitals responded to this pressure by reducing the real growth in costs per case to 2.7 percent. In 1994, there was even more pressure from payers for hospital services, as revenues per case declined in real terms by 0.4 percent. Hospitals responded by curtailing their costs even more, with a reduction of 1.0 percent.

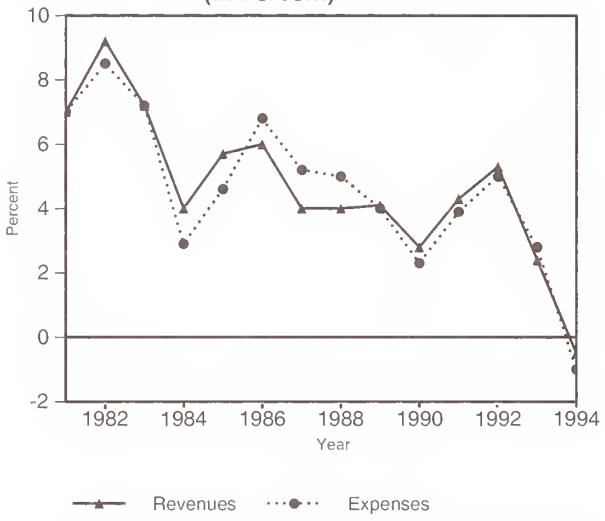
Trends in Total Margins—The total margin indicates the extent to which hospitals produce enough revenues to cover their expenses. It is the difference between total revenues and total expenses as a percentage of total revenues. Total expenses include spending for all inpatient and outpatient care as well as for other activities; total revenues include payments from all patients and their insurers as well as receipts from non-patient sources. Because the total margin reflects revenues and costs from all sources, it is the best available measure of overall hospital financial status.[19]

Revenue growth through the 1970s and early 1980s resulted in a total margin of 4.2 percent by 1982 (see Figure 3-7). The early years of PPS saw a substantial increase in the aggregate total margin, which peaked at 6.0 percent in 1985, largely because of high profits on Medicare cases. In subsequent years—as Medicare tightened its control over inpatient payment rate increases—the total margin began to fall. It bottomed out at 3.3 percent in 1988 and then began rising again, reaching 4.6 percent by 1992. After dipping slightly in 1993, it increased to 4.8 percent in 1994, the highest level since 1986 and above the levels experienced before PPS began.

Overall financial performance has been far from uniform across hospital groups. In the eleventh year of PPS, the aggregate total margin for rural hospitals was 0.8 percentage points higher than that for urban hospitals (see Table 3-13). In the first year of PPS, conversely, the total margin for urban hospitals was 2.7 percentage points higher than that for rurals. This gap narrowed steadily before disappearing after the fifth year; since then, rural hospitals have fared better than urban ones.

Hospitals in large urban areas have consistently had a lower total margin than facilities in other urban areas. Similarly, rural referral centers have always had a higher total margin than other rural

Figure 3-6. Real Change in Total Hospital Expenses and Revenues Per Adjusted Admission, 1981-1994 (In Percent)

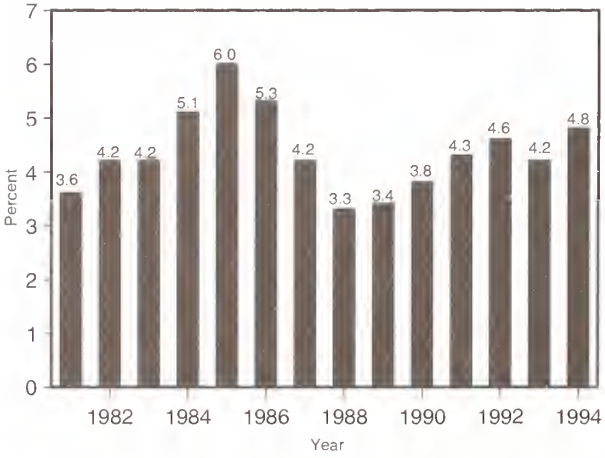


Note: Total hospital expenses and revenues adjusted by the consumer price index for all urban consumers (CPI-U).

SOURCE: American Hospital Association Annual Survey of Hospitals.

hospitals, which generally do not have special payment status under Medicare. Sole community hospitals had a higher total margin than those in the other rural category in the first four years of PPS, fell behind that group in the fifth and sixth years, and surpassed it again beginning in the eighth year. This change followed implementation of the special payment provision for sole community hospitals enacted in OBRA 1989.

Figure 3-7. Aggregate Total Margin, 1981-1994 (In Percent)



SOURCE: American Hospital Association Annual Survey of Hospitals.

Major teaching hospitals, which receive the largest IME and GME payments under Medicare, consistently have had a lower aggregate total margin than other teaching or non-teaching hospitals. Similarly, the total margin for disproportionate share hospitals in large urban areas—whose Medicare payments are adjusted to reflect their treatment of a large proportion of low-income patients—has always been significantly below average. This difference rose annually through the seventh year of PPS, then narrowed beginning with the eighth year, probably reflecting increases in both Medicare and Medicaid disproportionate share payments. It went up again in the eleventh year.

Hospitals receiving both teaching and DSH payments have consistently had a below-average total margin, but generally not as low as either the major teaching or large urban DSH group. In the first six years of PPS, teaching hospitals that did not get DSH payments had a higher margin than any of the groups defined on the basis of payment adjustments. Since the eighth year, the total margin for DSH hospitals that did not receive teaching payments has been highest among these four groups.

Voluntary hospitals had a lower total margin than rural government hospitals in the eleventh year of PPS. Proprietary hospitals had the highest margin of any group, reflecting their greater control over costs and more favorable payer mix (see the discussion below). Their margin was 3.9 percentage points above the national average in the eleventh year, after falling 0.8 percentage points below the average five years earlier.

Distribution of Total Margins—As with the PPS inpatient margins discussed above, total margins vary widely among individual hospitals within any group. By the eleventh year of PPS, 22.1 percent of all hospitals had negative total margins; however, one of every four exceeded 7.7 percent (see Table 3-14). Moreover, the difference between the hospitals with the highest and lowest total margins had narrowed since the late 1980s.

The distribution of total margins within the urban and rural groups at first appears inconsistent with the aggregate values cited earlier. Though rural hospitals as a group fared better than urban facilities, more rural than urban hospitals had a negative margin (25.1 percent compared with 19.5

Table 3-13. Total Hospital Margin, by Hospital Group, First 11 Years of PPS (In Percent)

Hospital Group	PPS 1	PPS 2	PPS 3	PPS 4	PPS 5	PPS 6	PPS 7	PPS 8	PPS 9	PPS 10	PPS 11
All hospitals	7.1%	6.4%	4.2%	3.5%	3.3%	3.5%	3.5%	4.4%	4.3%	4.4%	4.8%
Urban	7.5	6.7	4.4	3.6	3.4	3.4	3.4	4.3	4.2	4.3	4.7
Rural	4.8	4.5	2.9	2.7	3.2	4.0	4.4	5.0	5.2	5.1	5.5
Large urban	7.2	6.4	3.9	3.1	2.7	2.8	2.3	3.5	3.6	3.6	3.8
Other urban	8.1	7.2	5.3	4.6	4.4	4.6	5.2	5.6	5.3	5.4	6.1
Rural referral	7.5	8.4	6.0	6.0	5.5	6.4	6.8	6.6	6.4	6.5	6.9
Sole community	4.6	3.9	2.3	1.9	2.1	3.1	3.7	5.0	5.2	5.4	5.8
Other rural	4.0	3.5	2.0	1.8	2.7	3.4	3.7	4.4	4.7	4.4	4.7
Major teaching	4.5	5.2	2.1	2.2	2.1	1.7	0.8	3.6	3.3	3.2	2.5
Other teaching	8.2	7.3	5.3	4.3	4.0	4.5	4.2	4.5	4.3	4.5	5.0
Non-teaching	7.3	6.2	4.4	3.6	3.4	3.7	4.2	4.7	4.8	4.8	5.7
DSH:											
Large urban	6.3	5.5	2.9	2.2	1.8	2.1	1.3	2.9	3.1	3.2	3.3
Other urban	8.0	7.1	5.4	4.6	4.5	4.7	5.2	6.0	5.8	5.4	6.4
Rural	5.4	5.7	3.0	3.2	3.6	4.5	5.2	7.0	7.0	5.7	5.8
Non-DSH	7.4	6.8	4.8	4.1	4.0	4.0	4.2	4.5	4.4	4.6	5.0
Teaching and DSH	6.4	5.9	3.4	3.0	2.6	3.0	2.4	3.9	3.8	3.8	3.9
Teaching only	8.7	8.2	5.7	4.7	5.0	4.3	4.2	4.7	4.1	4.6	4.4
DSH only	7.8	6.5	4.5	3.3	3.4	3.5	4.1	5.1	5.2	5.0	6.1
No teaching or DSH	6.8	6.0	4.3	3.7	3.5	3.8	4.3	4.3	4.5	4.6	5.3
Voluntary	7.7	6.9	4.7	3.7	3.6	3.8	3.8	4.2	4.0	4.1	4.6
Proprietary	8.5	7.6	5.4	4.6	3.4	2.7	3.6	5.2	6.2	7.2	8.7
Urban government	3.6	3.8	0.9	2.2	1.9	2.5	1.7	4.5	4.4	4.2	3.2
Rural government	4.5	2.8	1.8	1.1	2.2	3.0	3.5	4.8	5.3	4.4	4.7

Note: Data for each PPS year are from hospital cost reporting periods beginning during that Federal fiscal year. For instance, PPS 1 data are from hospitals' cost reports beginning during the first year of PPS (fiscal year 1984). Excludes hospitals in Maryland; includes hospitals in Massachusetts and New York beginning with PPS 3 and New Jersey beginning with PPS 6. DSH = disproportionate share.

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

percent). This reflects a large number of small rural hospitals with low total margins.

The median total margin for hospitals in large urban areas was 1.2 percentage points below that for other urban hospitals, but facilities in both groups were less likely than average to have negative total margins. Rural referral centers, on the other hand, had the highest median total margin of any hospital group and only about one in 16 had a negative margin. Sole community hospitals had higher margins than other rural hospitals on average, and their margins were also less likely to be negative.

Another apparent contradiction is the case of major teaching hospitals. As a group they had significantly lower total margins than non-teaching facilities. However, they were about equally likely to have negative margins. This may result from the fact that teaching hospitals are likelier to receive public support for their teaching activity and special patient care services (such as uncompensated care).

The distribution of total margins across proprietary hospitals reflects the higher financial returns they experience and the greater risk they face. In the eleventh year of PPS, the median total margin for these hospitals was 2.3 percentage points above the national median; one in four exceeded 13.3 percent. However, compared with voluntary hospitals, proprietary facilities were likelier to have negative margins.

COST SHIFTING

Cost shifting occurs when hospitals use revenue gains from certain payers to offset other revenue

Table 3-14. Distribution of Total Hospital Margins, by Hospital Group, PPS 11 (In Percent)

Hospital Group	Percentile			Percent With Negative Margin
	25th	Median	75th	
All hospitals	0.4%	3.8%	7.7%	22.1%
Urban	0.7	4.0	7.7	19.5
Rural	0.0	3.6	7.7	25.1
Large urban	0.3	3.4	7.2	21.1
Other urban	1.2	4.6	8.4	17.5
Rural referral	3.7	6.6	9.6	6.5
Sole community	0.1	4.4	8.7	24.2
Other rural	-0.5	3.2	7.1	27.2
Major teaching	0.2	2.5	5.2	22.4
Other teaching	1.1	4.1	7.4	15.3
Non-teaching	0.2	3.9	7.9	23.4
DSH:				
Large urban	0.3	3.2	6.9	20.6
Other urban	2.0	5.2	9.2	12.9
Rural	0.0	4.0	8.4	24.6
Non-DSH	0.1	3.6	7.5	23.9
Teaching and DSH	0.8	3.5	7.1	16.6
Teaching only	1.0	3.7	6.8	17.6
DSH only	0.9	4.5	8.7	20.2
No Teaching or DSH	0.0	3.6	7.6	24.7
Voluntary	0.9	3.8	7.3	18.9
Proprietary	0.1	6.1	13.3	23.7
Urban government	0.0	3.1	7.1	24.4
Rural government	-0.9	3.2	7.3	29.5

Note: Excludes hospitals in Maryland. DSH = disproportionate share.

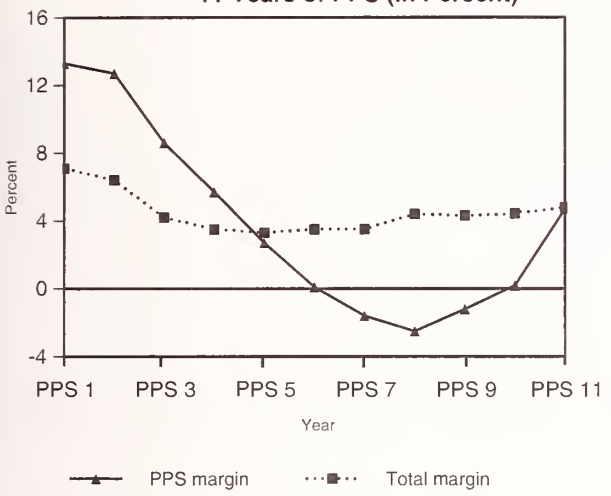
SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

shortfalls. Hospitals have long received higher payments relative to costs from some payers than from others, and above-cost revenues from at least some private insurers have always been the primary method of funding bad debts and charity care. But cost shifting implies that there is a relationship between *changes* in the prices paid by different groups—that is, an increase in losses (or a decrease in gains) from one source is offset directly by an increase in payments from another source.

In the latter half of the 1980s and early 1990s, Medicare payments rose much more slowly than the costs of treating Medicare patients. Consequently, the aggregate PPS inpatient margin dropped steadily, as discussed earlier. However, hospitals generally were able to cover the subsequently higher losses by cost shifting to private insurers. This was accomplished by obtaining payment increases from private payers that exceeded the growth in costs for the patients they sponsored. Primarily because of cost shifting, hospitals were able to maintain fairly stable total margins (see Figure 3-8). After the first two years of PPS, when double-digit Medicare margins greatly improved hospitals' overall financial status, the average total margin dropped to 3.3 percent in the fifth year. It then rose to 4.4 percent and stayed at about that level for three years.

In recent years, more private insurers have actively limited their payments to hospitals, and the combined pressure from public and private payers appears to have produced the reduced rate of cost growth documented earlier. Because of this lower cost inflation,

Figure 3-8. PPS and Total Margins, First 11 Years of PPS (In Percent)



SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Admininstration.

hospitals have seen their performance under PPS improve, and have been able to absorb smaller payment increases from private insurers without experiencing deterioration in overall financial status. Between 1991 and 1994, PPS margins climbed more than 7 percentage points, from −2.5 percent to 4.7 percent, while total margins rose to 4.8 percent.

This section profiles gains and losses by source of revenue in 1994 for several groups of hospitals. Gains and losses as a percentage of total costs for a given payer represent the product of that payer's payment to cost ratio and its share of hospitals' total costs. Variation in gains and losses in 1994 reflects the relative ability the different groups of hospitals had in previous years to use cost shifting effectively.

In comparing 1994 gains and losses by payer for teaching hospital groups, there is a clear indication that greater teaching intensity is associated with less ability to cost shift, leading to worse overall financial position. Non-teaching and other teaching hospitals had similar losses from Medicare, Medicaid, and uncompensated care. But the non-teaching institutions were able to generate more above-cost revenue from private insurers, equal to 13.1 percent of total costs in contrast to 10.8 percent (see Table 3-15). This difference then translated into higher total gains expressed as a percentage of total costs.

Major teaching hospitals have the dual problems of higher overall losses from uncompensated care and less above-cost revenue from private insurers. Public major teaching institutions had the worst financial condition of any group, with aggregate gains of only 2.3 percent. On the one hand, they had the advantage of smaller losses from Medicare and Medicaid, resulting from higher Medicare IME payments and additional disproportionate share revenue from both Medicare and Medicaid.[20] They also had more funding from indigent care programs other than Medicaid. On the other hand, the benefits from these sources were more than offset by an uncompensated care burden that was 70 percent greater than for any of the other teaching-related groups.

Surprisingly, public major teaching hospitals had among the highest payment to cost ratios for private payers, almost 34 percent over the cost of care. But this produced little benefit due to their inability to attract privately insured patients; their private payer share of costs was only half that of the other groups. Private major teaching hospitals had the converse problem. Their privately insured patient share was the largest of the teaching-related groups, but they apparently had to make substantial pricing concessions to obtain that level of volume.[21] This left their private payer payments only 19 percent above costs.

Among geographic groups, hospitals located in other urban areas (those with a population below one million) had the largest total gains, linked directly to their ability to generate more above-cost revenue from private insurers. The same was true of DSH hospitals located in other urban areas. Both of these groups probably overlap considerably with the other teaching and non-teaching groups discussed above. DSH hospitals located in rural areas fare about the same as all rural institutions in terms of total gains. However, as with the other hospitals receiving DSH funds, this group had above-average uncompensated care losses. Although these were partially offset by DSH payments, rural DSH hospitals still suffered substantial overall losses from Medicare. As with the other hospitals with high total gains, the most important factor in their financial success was the ability to realize sizable gains from private payers.

Proprietary hospitals had by far the greatest total gains of any group in 1994 at 12.3 percent of total costs. An above-average ability to generate revenue from private payers was one key factor in this

Table 3-15. Gains or Losses by Payer, by Hospital Group, 1994 (In Percent)

Hospital Group	Gains or Losses as a Percentage of Total Costs							Private Payers	
	Total Gains[a]	Medicare[b]	Medicaid[b]	Other Government Payers and Subsidies[c]	Uncompensated Care[c]	Private Payers	Non-Patient Care	Share of Total Costs	Payment to Cost Ratio
Large urban	4.2%	-1.9%	-1.7%	0.2%	-4.8%	9.0%	3.3%	37.0%	124.3%
Other urban	6.5	-3.6	-1.4	0.2	-4.7	13.0	3.0	36.3	135.7
Rural	5.9	-3.7	-1.3	0.5	-4.7	12.5	2.6	32.3	138.7
Major teaching, public	2.3	-0.3	-0.5	0.9	-8.0	6.5	3.8	19.1	133.9
Major teaching, non-public	3.8	-1.1	-1.7	0.2	-4.7	7.3	3.8	38.8	118.9
Other teaching	5.4	-2.9	-1.2	0.1	-4.6	10.8	3.1	38.1	128.4
Non-teaching	6.1	-3.7	-1.7	0.2	-4.5	13.1	2.6	36.6	135.8
DSH:									
Large urban	3.5	-0.8	-1.7	0.2	-5.6	8.3	3.3	33.0	125.0
Other urban	6.9	-2.7	-1.5	0.3	-5.1	12.9	3.0	34.9	137.1
Rural	6.0	-3.4	-1.5	0.3	-5.7	13.7	2.6	29.3	146.7
Non-DSH	5.6	-4.3	-1.1	0.2	-3.9	11.7	3.0	40.1	129.1
Voluntary	4.9	-2.9	-1.7	0.1	-4.5	10.6	3.2	38.2	127.8
Proprietary	12.3	-0.7	-0.6	0.3	-4.0	16.1	1.2	37.5	143.0
Urban government	3.2	-1.8	-1.1	0.7	-6.7	8.7	3.5	24.5	135.2
Rural government	5.3	-4.3	-1.1	1.0	-4.6	11.7	2.6	31.1	137.6

Note: This analysis by hospital group is limited to data for hospitals that submitted all required data elements, while the analysis included in Chapter 1 for all community hospitals uses imputed as well as reported data. Most revenue (and corresponding costs) from Medicaid health maintenance organizations and Medicare risk plans are included in the private payer category. Due to reporting inconsistencies related to Medicaid disproportionate share hospital payments and provider-specific taxes, there is a margin of error for the numbers related to all payers in 1994. The breakdown by teaching status excludes non-PPS hospitals. DSH = disproportionate share.

[a] Gains or losses as a percentage of total costs for each of the six sources of revenue shown sum to total gains as a percentage of total costs. The values shown would be slightly lower if expressed as total margins, where total gains are calculated as a percentage of total revenue rather than total costs.

[b] Medicare and Medicaid costs equal all costs, both inpatient and outpatient, attributed by hospitals to these programs' patients regardless of whether the costs are reimbursable by the programs.

[c] Operating subsidies from state and local governments were considered as payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Additional subsidies above this level were counted as separate revenue.

SOURCE: ProPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

outcome; proprietary hospitals had an unusually high private payer payment to cost ratio—143 percent—coupled with the same private sector cost share as voluntary hospitals. But another important factor was Medicare losses of only 0.7 percent, compared with 2.9 percent for voluntary institutions. This more favorable outcome is not linked to receiving either IME or DSH payments; rather, it appears to have resulted primarily from proprietary hospitals having lower per case costs after several years of slower cost growth.[22]

CONCLUSIONS

In a rapidly changing environment, hospitals have maintained—and in some cases, even improved—their financial status. This has been accomplished through reductions in cost growth that are unprecedented in their magnitude and duration. In the mid- and late-1980s, while Medicare was exerting strong pressure to control expenses, hospitals were able to support continued cost growth by generating more income from private payers. In the early 1990s, with private payers no longer willing or able to provide the surpluses that helped fuel the previous increases, hospitals responded by holding the trend in costs per case below the rate of general inflation. As a result, despite the all-time low rate of increase in per case payments in 1994, the total hospital margin was at its highest level in almost a decade.

The increased pressure from private payers is commonly attributed to the growth in managed care enrollment among the employed population. In 1993, private payer payments as a percentage of patient care costs decreased for the first time, a trend that accelerated in 1994. Although the industry responded by sharply curtailing cost growth, not all hospitals are being affected equally by this change. Many hospitals still receive large enough surpluses from private payers to maintain their total margins. Others get enough additional payments from Medicare or Medicaid to protect their financial status. Some hospitals, though, do not have a large enough share of privately insured patients or enough payment leverage with private insurers to offset their losses from charity care and bad debts.

In the face of diminished cost growth, PPS inpatient margins are rebounding from their negative levels of several years ago. Between the first and eighth years of PPS, the PPS inpatient margin fell from 13.3 percent to −2.5 percent, a decline of 15.8 percentage points in seven years. The ninth year saw the first increase in the PPS margin, and ProPAC estimates that if current cost and payment trends hold, the margin for the thirteenth (current) year will be 8.8 percent—an increase of 11.3 percentage points in five years. These wide fluctuations in the PPS margin are due to the trend in costs rather than in payments. Medicare per case payment growth for inpatient hospital services has been fairly stable over time; the increases in the tenth and eleventh years were as low as they have ever been.

As Medicare payment policy is deliberated in the coming months and years, decision makers will have to balance some important considerations. PPS updates historically have been pegged to a reasonable rate of increase in the cost of providing inpatient care to Medicare beneficiaries. This has led to stable increases in payments per case, despite tremendous pressure to raise payments in the face of negative margins when costs were escalating rapidly, and to lower them when margins were high and costs were rising more slowly.

At the same time, as a program funded with public monies, Medicare has a responsibility to be a prudent purchaser of health care. The imminent insolvency of the Hospital Insurance Trust Fund magnifies the importance of this role. Taking advantage of the forces at play in the private sector could result in substantial savings for the program. As the recent health care debate has shown, striking a balance between these two roles (reasonable payer and prudent purchaser) is a difficult process. The solution must consider the Medicare beneficiary, the fiscal stability of the Medicare program, and the Federal budget deficit, along with the broader influence the program can have on the financing and provision of health care in this country.

Notes to Chapter 3

1. Until fiscal year 1995, hospitals were classified into three groups for purposes of the standardized payment amount: large urban, other urban (hospitals in MSAs with population under one million), and rural (hospitals not in MSAs). As of fiscal year 1995, there are two groups for purposes of the standardized payment amount: large urban and other areas (hospitals in other urban and rural areas). Hospitals that are not located in large urban areas may be eligible for the higher large urban standardized payment amount if they meet certain criteria that allow them to be reclassified as large urban by the Medicare Geographic Classification Review Board.

2. The wage index is applied to the labor-related portion (71.4 percent) of the standardized payment amount. For hospitals in Alaska and Hawaii, a cost of living adjustment is applied to the non-labor-related portion (28.6 percent) of the standardized payment amount. Hospitals meeting certain criteria may also be reclassified by the Medicare Geographic Classification Review Board for purposes of the wage index into an area in which they are not physically located.

3. OBRA 1993 requires that Medicare phase out payment for cases based on length of stay (day outliers) and increase reliance on payment based on costliness (cost outliers). The law requires reduction in 25 percent increments. HCFA estimates that in fiscal year 1996, day outliers will account for about 16 percent of total outlier payments, or 50 percent of their 1994 level.

4. The cumulative effects of CMI increases and payment policy changes through fiscal year 1995 are compared by hospital group in Prospective Payment Assessment Commission, *Medicare and the American Health Care System: Report to the Congress* (Washington, DC: ProPAC, 1995) 37.

5. The data presented in this section are based on projections from ProPAC's PPS payment model, Congressional Budget Office estimates, and fiscal year 1994 MedPAR file data from the Health Care Financing Administration. Maryland hospitals are excluded from the analysis because the structure of payments made for Medicare patients under its rate setting waiver is not the same as that of the Medicare program.

6. Old capital costs are associated with assets purchased before the end of 1990 and put in use by September 30, 1994. All other capital is considered new capital and is paid for at the Federal rate.

7. The PPS 13 inpatient margin is based on ProPAC's forecasts of capital payments and costs.

8. At the time, concern focused on the PPS operating margin, which showed a similar pattern to the one now seen for the inpatient margin. The PPS inpatient margin had not yet been developed.

9. This is an estimate of the average total per resident payment amount. Medicare pays only its share of the hospital-specific amount for each resident.

10. The estimates are from the American Association of Medical Colleges Graduate Medical Education Tracking Census.

11. Congressional Budget Office, *Medicare and Graduate Medical Education* (Washington, DC: CBO, September 1995)16-18.

12. Linda H. Aiken and Marla E. Salmon, "Health Care Workforce Priorities: What Nursing Should Do Now," *Inquiry* 31(3):318-29, Fall 1994.

13. Department of Health and Human Services, *Report to Congress: Medicare Hospital Outpatient Prospective Payment,* March 1995.

14. Prospective Payment Assessment Commission, *Analysis of the Secretary's Proposal for Medicare Payment for Hospital Outpatient Services*, Congressional Report C-95-01, July 1995, 19-22.

15. This and all other measures using data from the American Hospital Association (AHA) National

Hospital Panel Survey cover all community hospitals. Most community hospitals are paid under the Medicare prospective payment system, but short-term psychiatric, rehabilitation, and children's hospitals are also included.

16. Data on the acute care and long-term care segments of hospital utilization are from the AHA's Annual Survey of Hospitals, which is not yet available for 1995. All other data cited in this section are from the AHA's National Hospital Panel Survey.

17. Prospective Payment Assessment Commission, *Report and Recommendations to the Congress,* March 1995 (Washington, DC: ProPAC, 1995) 78-9.

18. Federal tax reform legislation passed in September 1986 limited the ability of hospitals to refinance debt using a method called advance refunding. It allows only one advance refunding of bonds issued after 1985 and two refundings for bonds issued earlier. Michael Grossman and others, "Determinants of Interest Rates on Tax-Exempt Hospital Bonds," *Journal of Health Economics* 12(4):385-410, December 1993.

19. The discussion of trends in total margins is based on data from the AHA's Annual Survey of Hospitals. The distribution of total margins across hospital groups under PPS is described using data from the Medicare Cost Reports submitted to HCFA. The AHA and HCFA data may vary slightly because they are derived from different sources and cover different reporting periods. They are generally comparable, however, and the cost report data are useful in indicating trends across hospital groups. The Medicare Cost Report data are also used to describe the distribution of total margins within hospital groups.

20. Major teaching hospitals have losses from Medicare in this analysis, despite having a positive PPS inpatient margin, because a measure of much broader scope is being used. In addition to PPS operating and capital payments, it includes Medicare payments for graduate medical education programs, outpatient care, hospital-based skilled nursing services, and hospital-based home care. Payments for all of these services tend to be less than costs, due to use of fee schedules, discounts from cost-based rates, and payment limits. In addition, these payments are matched to Medicare's share of all hospital costs, while the PPS inpatient margin uses only Medicare-allowable costs, which are believed to be 3 percent to 5 percent lower.

21. The private major teaching group is heavily influenced by hospitals located in New York City, and previous ProPAC analysis has shown that New York hospitals have the lowest private insurer payment to cost ratios in the country. However, in this case the low payments relative to costs are due to state-level rate regulation rather than to competition among private insurers for hospital services. See Prospective Payment Assessment Commission, *Medicare and the American Health Care System, Report to the Congress,* June 1995, 134-35.

22. Lower costs for proprietary hospitals were documented in an unpublished ProPAC analysis of costs per adjusted discharge by teaching status within type of ownership groups, based on 1993 data from the AHA Annual Survey of Hospitals. In addition, proprietary hospitals have had the lowest annual Medicare cost per case increases since 1991, as Table 3-4 shows.

Chapter 4

Post-Acute Care Providers

Chapter 4

Post-Acute Care Providers

Payments to post-acute care providers—skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies—are among the fastest growing in the Medicare program. Changing medical practice patterns, particularly the decline in the length of acute inpatient hospital stays, have contributed to this increase. But the rise in use of post-acute care cannot be attributed solely to a shift in site of service. Other factors, among them improved rehabilitation techniques, greater service capacity, and provider financial incentives, have fueled the growth in Medicare expenditures for post-acute care. That skilled nursing, rehabilitation, and therapy services are delivered by each of the post-acute care providers contributes to the difficulty in evaluating utilization and in controlling Medicare spending.

By 1995, Medicare expenditures for skilled nursing facility (SNF) and home health services combined reached more than $26 billion, up from $6 billion in 1990. Payments to rehabilitation facilities and long-term care hospitals also have grown rapidly. While any one of these categories accounts for a relatively small share of program dollars, annual increases in spending for each of them have been dramatic, making Medicare's payment policies for these services targets for reform. Prospective payment systems for these providers are being considered, and linking payments for post-acute care providers to hospital payment rates has also been discussed.

Many beneficiaries served by these providers have had a recent acute care hospitalization, hence the term *post-acute care* providers. At least some of the rehabilitation, skilled nursing, or therapy services they receive are probably related to the condition treated during their acute inpatient stay. The incentives of Medicare's prospective payment system (PPS) to shorten inpatient acute care stays may contribute to the greater need for these services. In addition, medical advances have expanded the range of patients who can benefit from certain therapies and have made it possible to provide some interventions in less intensive settings. Medicare's cost-based payment policies have also played a role in stimulating the growth of these providers. Finally, changing practice patterns have driven up demand.

Traditionally, the types of beneficiaries and the mix of services they receive have differed across post-acute settings, partly because of Medicare's various payment and coverage policies. Rehabilitation facilities, for example, specialize in intensive rehabilitation services and primarily treat patients with orthopedic or neurological disorders. Most home health visits to homebound beneficiaries are for skilled nursing or aide services. Skilled nursing facilities emphasize skilled nursing care. Long-term care hospitals treat patients who need inpatient care over an extended period.

More recently, however, distinctions among these providers have blurred. Skilled nursing facilities, for example, increasingly are offering subacute care, which is less intensive than acute hospital care but more intensive than traditional skilled nursing care. Home health agencies may treat beneficiaries receiving intravenous therapy, thus preventing extensive hospitalizations. New long-term care hospitals are expanding their services to treat ventilator-dependent patients with complex conditions. For many beneficiaries, several types of post-acute care providers could meet their needs.

This chapter presents the results of a Prospective Payment Assessment Commission (ProPAC) study that examined two major issues: the relationship between Medicare acute hospitalizations and post-acute care, and the overlap in services and types of beneficiaries across post-acute care providers. Both should be considered in Medicare's efforts to control its expenditures for these services. Because separate payments are made to each provider during the course of treatment, there are few incentives to coordinate services across sites and manage

them efficiently. Further, since beneficiaries with similar characteristics can receive the same services from several post-acute care providers, any change in payment or coverage policies for one could affect the use of and spending for another.

The first section of the chapter discusses the expenditure and use trends across post-acute providers, and then explores the relationship between acute care and post-acute services. A separate discussion of each post-acute care provider follows. The chapter concludes by synthesizing the information on patient characteristics and service use across the provider types.

POST-ACUTE CARE SPENDING, USE, AND SUPPLY

The rapid rise in Medicare expenditures for post-acute care providers is driven predominantly by greater use, which, in turn, is possible because of expanded service capacity. This upward spiral is fueled by Medicare's cost-based payments. The need and demand for post-acute care have grown as inpatient stays have been shortened and, for some beneficiaries, eliminated altogether. Changes to Medicare SNF and home health care coverage guidelines in the late 1980s broadened access to post-acute care for many enrollees. Further, more patients can now receive rehabilitation services because of improved surgical and treatment techniques. At the same time, the number of post-acute care providers has been climbing, and facilities that historically provided lower levels of care are now furnishing more intensive services.

Medicare Spending and Post-Acute Care Providers

The substantial growth in beneficiaries' use of post-acute care providers first seen in the late-1980s has continued into the 1990s. Between 1990 and 1995, the number of Medicare beneficiaries who received SNF care shot up from 638,000 to 990,000 (see Table 4-1). During this same period, the number of Medicare-covered SNF days grew by 9 percent annually, while payments increased each year by 33 percent. One of the reasons that payments rose more than covered days was the greater use of therapy and other ancillary services. By 1995, Medicare SNF payments totaled $10.3 billion.

Medicare expenditures for home health care have also climbed in recent years. This is because of a rise in the volume of services, rather than in the payment per service. Between 1990 and 1995, the number of beneficiaries receiving home health care almost doubled, from 1.9 million to 3.6 million. In addition, visits per person served escalated from 36 in 1990 to 70 in 1995. The combined effect of more beneficiaries receiving home health care and additional visits per user led to a 29 percent annual growth rate in Medicare home health visits. This was matched by a fourfold increase in Medicare payments, from $3.9 billion in 1990 to $16 billion in 1995.

Medicare rehabilitation facility and long-term care hospital admissions and payments have also risen significantly. ProPAC's analysis of data from 1990 to 1993 found that Medicare discharges from rehabilitation facilities and long-term care hospitals increased, respectively, by about 12 percent and 14 percent annually. During this same period, combined program and beneficiary payments accelerated at a much faster rate. Payments to rehabilitation facilities rose, on average, by almost 25 percent per year, while those to long-term care hospitals climbed 33 percent annually. That payments increased so much faster than discharges reflects the entry of new providers into the market. New facilities tend to receive higher payments per case than do older ones that have payment limits based on earlier costs. (See Chapter 3 for a description of payment rules for PPS-excluded hospitals.)

Supply of Post-Acute Care Providers

Spurred by higher use and by cost-based payments, the number of Medicare-certified post-acute care providers has grown markedly, contributing to the upward spiral in expenditures (see Table 4-2). Except for swing-bed hospitals, all of these provider groups experienced double-digit growth between 1991 and 1995.[1] The number of hospital-based SNFs and home health agencies went up by more than 50 percent, suggesting that hospitals are continuing to expand into other service areas. Hospital-based rehabilitation units also increased, but more slowly (by 19 percent). Although still relatively few in number, Medicare-certified long-term care hospitals nearly doubled over this period. Combined, almost 25,000 Medicare-certified post-

Table 4-1. Medicare Skilled Nursing Facility and Home Health Care Payments and Use, 1990-1995

Year	Skilled Nursing Facility			Home Health Care		
	Payments (In Billions)	People Served	Days (In Millions)	Payments (In Billions)	People Served	Visits (In Millions)
1990	$ 2.5	638,000	25.1	$ 3.9	1,940,000	69.5
1991	2.9	671,000	23.7	5.6	2,223,000	100.2
1992	4.5	785,000	29.0	7.9	2,523,000	135.6
1993	6.4	908,000	34.3	10.3	2,868,000	169.4
1994	8.3	945,000	36.9	13.4	3,325,000	221.9
1995*	10.3	990,000	38.8	16.0	3,615,000	252.3
Average Annual Increase	32.7%	9.2%	9.1%	32.6%	13.3%	29.4%

Note: Payments are incurred Part A expenditures, rather than outlays, and do not include beneficiary copayments.

* Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

acute care providers delivered services to Medicare beneficiaries in 1995.

Regional Variation in Supply and Use

The availability of post-acute care providers varies substantially across the country, reflecting differences in practice patterns, delivery systems, and state regulations. As of March 1996, New England had the largest overall supply of Medicare-certified beds in post-acute care facilities (see Table 4-3).[2] It had the most SNF beds per 1,000 beneficiaries, 40 percent more than the national average and 69 percent more than the Pacific region, which had the lowest supply. New England also had almost six times the national average number of long-term care hospital beds per beneficiary and almost 15 times as many as the West North Central region. The number of rehabilitation facility beds in this area, however, was below the national average. The variation was even greater at the state level. For example, SNF beds per 1,000 beneficiaries ranged from 20 in Hawaii and Nevada to 70 in Minnesota and North Dakota.

Table 4-2. Post-Acute Care Providers, Selected Years

Provider Type	1991	1993	1995	Percent Change 1991-1995
Skilled nursing facility	11,284	12,924	14,603	29%
Free-standing	8,786	10,078	11,346	29
Hospital-based	1,192	1,514	1,897	59
Swing-bed hospital	1,306	1,332	1,360	4
Rehabilitation facility	852	980	1,029	21
Free-standing	152	184	196	29
Hospital-based	700	796	833	19
Long-term care hospital	91	115	176	93
Home health agency	5,949	7,151	9,040	52
Free-standing	4,254	5,035	6,450	52
Hospital-based	1,601	1,998	2,429	52
Other*	94	118	161	71

Note: These counts include only Medicare-certified providers. Data are as of December of each year.

* Includes home health agencies based in rehabilitation and skilled nursing facilities.

SOURCE: Health Care Financing Administration, Office of Survey and Certification.

SNF, rehabilitation facility, and long-term care hospital discharges also vary, often corresponding with differences in the availability of providers (see Table 4-4). In fiscal year 1994, for instance, the West South Central region had more than three times the number of rehabilitation facility discharges per 1,000 beneficiaries that were in the Pacific region. This reflects two important factors: There were more rehabilitation facility beds in the West South Central region, and the Pacific has a large number of Medicare managed care enrollees whose use was not reflected in these data. The South Atlantic had a below-average supply of all post-acute providers and below-average use. New England, on the other hand, had

Table 4-3. Post-Acute Care Beds Per 1,000 Beneficiaries, by Census Division and Provider Type, 1996

Census Division	Skilled Nursing Facility*	Rehabilitation Facility	Long-Term Care Hospital
National	39.2	1.0	0.5
New England	54.7	0.9	2.9
Middle Atlantic	41.9	1.0	0.3
South Atlantic	32.6	0.8	0.4
East North Central	43.7	0.8	0.3
East South Central	36.2	0.9	0.4
West North Central	49.0	0.9	0.2
West South Central	37.0	1.8	0.9
Mountain	33.8	1.1	0.4
Pacific	32.4	0.8	0.3

Note: These counts include only Medicare-certified beds.

* Does not include swing beds.

SOURCE: Health Care Financing Administration, Office of Survey and Certification and Bureau of Data Management and Strategy.

more SNF and long-term care hospital beds and discharges.

ACUTE HOSPITAL CARE AND USE OF POST-ACUTE CARE PROVIDERS

Whether a beneficiary uses post-acute care after an acute PPS hospital stay is related to a number of factors. Certain patients have a greater need for these services because of their underlying diagnoses, functional condition, or severity of illness. Physician and provider practice patterns are also likely to influence post-acute care use. Further, it is easier for some patients to get this kind of care. Beneficiaries hospitalized in facilities that own post-acute care providers probably have greater access to these services. The substantial geographic variation in the distribution of these providers likely affects use as well.

To better understand variation in the use of post-acute care providers, ProPAC examined data on Medicare beneficiaries who had PPS hospital inpatient stays in fiscal year 1994. Those who used a post-acute care provider were compared with those who did not. As with any analysis like this, severity of illness and functional status could not be accounted for, though they are important in explaining service use.

The period typically used to define post-acute care spans one to 30 days after discharge from an acute care hospital. The post-acute care provided to beneficiaries within one day of discharge is most likely related to the reason for their hospitalization. Additionally, site of care substitution, that is, the delivery of services in a post-acute setting that were formerly provided in the hospital, is most likely to occur when beneficiaries are discharged immediately to such providers. The opportunity for site of care substitution between hospitals and post-

Table 4-4. Post-Acute Care Provider Use, by Census Division and Provider Type, Fiscal Year 1994

Census Division	Discharges Per 1,000 Beneficiaries: Skilled Nursing Facility	Discharges Per 1,000 Beneficiaries: Rehabilitation Facility	Discharges Per 1,000 Beneficiaries: Long-Term Care Hospital	Home Health Episodes Per 1,000 Beneficiaries*
National	32.6	8.2	0.9	69.5
New England	36.4	7.7	5.4	85.8
Middle Atlantic	24.7	10.2	0.9	72.0
South Atlantic	26.7	6.2	0.6	75.5
East North Central	37.0	8.6	0.5	63.8
East South Central	28.9	8.8	0.5	74.3
West North Central	47.4	6.9	0.7	58.8
West South Central	53.6	14.1	1.3	79.5
Mountain	33.3	8.3	0.4	56.8
Pacific	20.7	4.3	0.4	60.1

Note: These counts underestimate total use because they do not include the services delivered to Medicare beneficiaries enrolled in managed care plans.

* Episodes are a series of visits preceded and followed by a 60-day period without home health use.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

acute care settings suggests that Medicare's fixed inpatient payment rates may need to be reevaluated periodically.

Hospital Discharges to Post-Acute Settings

In fiscal year 1994, nearly one-quarter of beneficiaries who had a PPS hospital inpatient stay subsequently used post-acute care provider services.[3] Some 20.1 percent received such care within one day of being discharged; 4.3 percent did so between two and 30 days after being discharged (see Table 4-5). At least some of the post-acute care services for these beneficiaries probably were related to the reason for their hospitalization, since care began right after they left the hospital.

Home health agencies were the most frequently used post-acute care provider. Approximately 7.6 percent of Medicare acute hospital admissions were followed by a home health episode that began within one day of discharge.[4] Another 6.2 percent of admissions were followed by an episode commencing between two and 30 days after discharge. Many of the beneficiaries for whom home health use was delayed had initially been admitted to another type of post-acute care provider. Half the beneficiaries who used a post-acute care provider immediately after leaving the hospital (10.1 percent of all PPS hospital discharges) were admitted to a skilled nursing facility.

Rehabilitation hospitals or units were used by 2.2 percent of hospitalized beneficiaries immediately after they were discharged. These facilities accounted for about 10 percent of immediate post-acute care provider use. Long-term care hospitals were used less often, providing care to about 0.2 percent of the beneficiaries with a PPS hospital stay.

DRG Assignment and Use of Post-Acute Care

ProPAC used the diagnosis-related group (DRG) assignment made during the hospital stay to describe the patients who had post-acute care. DRGs were grouped according to two criteria: those in which a high proportion of patients used post-acute care providers immediately after being discharged, and those in which there were the largest number of post-acute care cases. The first group is important because policy proposals to bundle acute and post-acute payments probably would initially target DRGs in which a large share of beneficiaries use post-acute care. The high-volume group is equally important from a policy standpoint, since it includes numerous users of such care.

There were 15 DRGs in which about half of all beneficiaries discharged alive used a post-acute care provider immediately after leaving the hospital (see Table 4-6).[5] Most of these were DRGs related to musculoskeletal conditions or procedures, such as hip replacement or fracture of the hip or femur. The DRGs for tracheostomies were also in this high-use category. A different, less homogeneous set of DRGs made up the high-volume group, which explained nearly half the post-acute care used by beneficiaries following an

Table 4-5. Post-Acute Care Provider Use After PPS Hospital Discharge, by Provider Type, Fiscal Year 1994

	Use Within One Day of Discharge		Use Within 30 Days of Discharge	
Provider Type	Number of Discharges	Percent of All PPS Hospital Discharges	Number of Discharges	Percent of All PPS Hospital Discharges
Skilled nursing facility	1,078,246	10.1%	1,136,476	10.6%
Rehabilitation facility	239,945	2.2	254,926	2.4
Long-term care hospital	21,905	0.2	23,187	0.2
Home health agency	817,818	7.6	1,485,608	13.8
Total	2,157,203	20.1	2,619,510	24.4

Note: Columns do not sum to total because some beneficiaries used more than one post-acute care provider. Inpatient post-acute admissions that ended in fiscal year 1995 were not included. Therefore, these numbers slightly underestimate post-acute service use.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

acute admission while representing a little more than a third of all PPS hospital discharges (see Table 4-7). Discharges from the top five DRGs in this group accounted for over 30 percent of all post-acute provider use.

Post-Acute Care Use and Hospital Length of Stay

The relationship between post-acute care provider use and acute inpatient length of stay may suggest important differences in patient populations or patterns of care. In most cases, beneficiaries who used a post-acute care provider immediately after being discharged had longer hospital stays than those who did not (see Table 4-8). Patients who had a stroke (DRG 14) and used post-acute care, for example, had an average inpatient stay of 9.4 days. By contrast, the average stay for those who did not use post-acute care was 6.5 days. Hospital stays might be expected to differ depending on the beneficiary's age, sex, and race as well as the hospital location. ProPAC found, however, that these characteristics did not account for the differences in length of stay. The longer stays for post-acute care users were probably because they were sicker patients. The availability of home support or PPS hospital treatment patterns may also have contributed to observed differences.

There were four notable exceptions to this finding. Beneficiaries who used post-acute care immediately after a hospitalization for an operative musculoskeletal condition (DRGs 209, 210, 471, and 485) had similar or shorter lengths of stay than those who did not. Hospitals probably have established treatment protocols for these high-volume DRGs, so there is less variation in acute inpatient care.

Hospital Characteristics and Post-Acute Care Use

Whether a hospital owns a post-acute care facility, where the hospital is located, and its size are related to patients' use of post-acute care. Overall, nearly 22 percent of patients discharged from PPS hospitals that had their own post-acute care provider used such care immediately afterwards, compared with roughly 20 percent of beneficiaries who were in other hospitals (see Table 4-9).[6] Post-acute care use was about 10 percent more likely when the hospital owned a post-acute care provider. Fully 70 percent of hospitals in 1994 owned a home health agency, a skilled nursing facility, a distinct-part rehabilitation unit, or had SNF swing beds.

Beneficiaries who used post-acute care also had shorter acute inpatient stays when they were treated

Table 4-6. DRGs With Highest Proportion of Beneficiaries Using Post-Acute Care Providers, Fiscal Year 1994

DRG	Description	Total Number of PPS Hospital Discharges	After PPS Hospital Discharge, Use Within: 1 Day	30 Days
485	Limb reattachment, hip and femur procedures for multiple significant trauma	2,820	75.6%	80.0%
210	Hip and femur procedures except major joint, age >17 with CC	131,688	75.2	80.2
471	Bilateral or multiple major joint procedures of lower extremity	8,699	72.6	81.0
211	Hip and femur procedures except major joint, age >17 without CC	23,974	68.8	76.1
483	Tracheostomy except for face, mouth, and neck diagnoses	21,759	67.6	70.8
209	Major joint and limb reattachment procedures of lower extremity	314,831	65.2	74.5
113	Amputation for circulatory system disorders, except upper limb and toe	40,080	58.2	62.0
482	Tracheostomy for face, mouth, and neck diagnoses	6,938	57.5	63.7
236	Fractures of hip and pelvis	37,387	56.6	64.0
2	Craniotomy for trauma, age >17	4,991	53.1	57.3
14	Specific cerebrovascular disorders except TIA	301,043	52.7	58.8
235	Fractures of femur	5,778	50.7	55.8
126	Acute and subacute endocarditis	4,057	49.9	53.1
253	Fractures, sprains, strains, and dislocations of upper arm, lower leg except foot, age >17 with CC	18,066	49.7	57.6
486	Other operating room procedures for multiple significant trauma	2,258	48.4	54.4

Note: DRGs were assigned during PPS hospital stay. Patients who died in the hospital and DRGs with fewer than 1,000 discharges were excluded. DRG = diagnosis-related group. CC = complication and/or comorbidity. TIA = transient ischemic attack.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

Table 4-7. DRGs With Highest Volume of Beneficiaries Using Post-Acute Care Providers, Fiscal Year 1994

DRG	Description	PPS Hospital Discharges		Discharges to Post-Acute Care Providers	
		Total	Percent	Total	Percent
209	Major joint and limb reattachment procedures of lower extremity	314,831	3.0%	205,154	9.5%
14	Specific cerebrovascular disorders except TIA	301,043	3.2	158,504	7.3
127	Heart failure and shock	641,119	6.4	113,485	5.3
210	Hip and femur procedures except major joint, age >17 with CC	131,688	1.3	99,081	4.6
89	Simple pneumonia and pleurisy, age >17 with CC	406,905	4.1	86,846	4.0
79	Respiratory infections and inflammations with CC	168,483	1.9	53,683	2.5
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	207,141	2.1	51,289	2.4
88	Chronic obstructive pulmonary disease	341,957	3.3	50,658	2.3
148	Major small and large bowel procedures with CC	134,973	1.4	48,668	2.3
416	Septicemia, age >17	145,078	1.7	40,137	1.9
320	Kidney and urinary tract infections, age >17 with CC	168,420	1.6	38,450	1.8
121	Circulatory disorders with AMI and cardiovascular complication, discharged alive	161,997	1.5	32,371	1.5
174	Gastrointestinal hemorrhage with CC	226,613	2.2	32,137	1.5
106	Coronary bypass with cardiac catheterization	86,245	0.8	27,905	1.3
478	Other vascular procedures with CC	111,378	1.1	24,966	1.2
Total		3,547,871	35.5	1,063,334	49.3

Note: DRGs were assigned during PPS hospital stay. Post-acute care providers are skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies. Post-acute care services began within one day of PPS hospital discharge. Analysis excludes patients who died in the hospital. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity. AMI = acute myocardial infarction.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

in hospitals that owned a post-acute care provider. This was consistent across most DRGs, even after accounting for patient age, sex, and race differences and hospital location. For example, the average length of stay for patients with a stroke (DRG 14) was 9.0 days when the hospitalization occurred in a facility that owned a post-acute care provider; it was 10.7 days in other hospitals.

Thus the presence of post-acute care capacity on site is associated with more frequent use and shorter hospitalizations. Several reasons could account for this relationship. Patients in these facilities might use post-acute care more often because it is easier to arrange the transfer, since the provider is on site. Also, in these facilities, post-acute care use might not be reserved for the sickest patients, which would result in both shorter average inpatient stays and higher use. Another possible reason is that hospitals treating many patients who needed post-acute care may have been more likely to develop this capacity, and to increase their use of the acute care setting. Further, hospitals have financial incentives to reduce the cost of hospital stays and use on-site post-acute care capacity to generate revenue.

Hospital location and size also influence the use of post-acute care. Beneficiaries in hospitals in large urban areas received such care more often than expected, given the hospitals' mix of patients (see Table 4-10).[7] Those discharged from hospitals in rural and other urban areas used post-acute care less than expected. In urban hospitals with at least 400 beds, post-acute care use was lower than expected, while in smaller urban ones it was higher. Among rural hospitals, beneficiaries in larger hospitals generally used less post-acute care than those in smaller facilities. Overall, though, actual use of this care was less than expected in rural hospitals, regardless of hospital size.

Beneficiary use of post-acute care providers varied markedly by region, often reflecting differences in supply. Patients in the New England and Pacific regions used post-acute care providers about 25 percent more than expected, after adjusting for the mix of patients. Patients in the East South Central region used such providers 26 percent less than expected; those in the South Atlantic and West South Central regions had lower use as well.

In general, the acute care hospital DRG assignment and length of stay, along with certain facility

Table 4-8. PPS Hospital Length of Stay, by DRG and Post-Acute Care Provider Use, Fiscal Year 1994

DRG	Description	Length of Stay (In Days): Post-Acute Care Use	Length of Stay (In Days): No Post-Acute Care Use
14	Specific cerebrovascular disorders except TIA	9.4	6.5
79	Respiratory infections and inflammations, age >17 with CC	11.7	9.3
88	Chronic obstructive pulmonary disease	8.4	6.0
89	Simple pneumonia and pleurisy, age >17 with CC	9.3	7.0
127	Heart failure and shock	8.9	6.0
148	Major small and large bowel procedures with CC	16.5	11.8
209	Major joint and limb reattachment procedures of lower extremity	7.4	7.2
210	Hip and femur procedures except major joint, age >17 with CC	9.1	9.2
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	8.7	5.9
416	Septicemia, age >17	11.3	8.6
471	Bilateral or multiple major joint procedures of lower extremity	8.8	9.5
485	Limb reattachment, hip and femur procedures for multiple significant trauma	12.6	13.7

Note: DRGs were assigned during PPS hospital stay. Post-acute care providers are skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies. Post-acute care services began within one day of PPS hospital discharge. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

characteristics, were related to post-acute care use. Within a given DRG category, however, there can be a wide range of patient severity and functional status, and average length of stay can vary considerably. ProPAC plans to conduct further analyses and incorporate more patient clinical data and hospital information to better understand post-acute care use.

Table 4-9. Use of Post-Acute Care Providers and PPS Hospital Length of Stay, by Hospital Ownership of Providers, Fiscal Year 1994

DRG	Description	Post-Acute Care Use in Hospitals: With Providers	Post-Acute Care Use in Hospitals: Without Providers	Hospital Length of Stay (In Days) for Post-Acute Care Users in Hospitals: With Providers	Hospital Length of Stay (In Days) for Post-Acute Care Users in Hospitals: Without Providers
All DRGs		21.8%	19.8%	10.1	11.2
14	Specific cerebrovascular disorders except TIA	53.6	49.8	9.0	10.7
79	Respiratory infections and inflammations with CC	32.5	29.8	11.5	12.5
88	Chronic obstructive pulmonary disease	17.6	13.8	8.3	8.9
89	Simple pneumonia and pleurisy, age >17 with CC	21.7	19.9	9.1	10.0
127	Heart failure and shock	18.0	16.4	8.7	9.4
148	Major small and large bowel procedures with CC	36.1	35.1	16.3	17.1
209	Major joint and limb reattachment procedures of lower extremity	66.3	61.9	7.2	8.1
210	Hip and femur procedures except major joint, age >17 with CC	76.0	73.7	8.8	10.1
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	25.0	23.7	8.5	9.5
416	Septicemia, age >17	28.3	25.8	11.0	12.3
471	Bilateral or multiple major joint procedures of lower extremity	75.4	63.3	8.4	10.4
485	Limb reattachment, hip and femur procedures for multiple significant trauma	76.5	73.5	12.5	13.2

Note: DRGs were assigned during PPS hospital stay. Post-acute care providers are skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies. Post-acute care services began within one day of PPS hospital discharge. Beneficiaries did not necessarily receive post-acute care from a provider owned by the discharging hospital. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

Table 4-10. Actual and Expected Post-Acute Care Provider Use, by Hospital Group, Fiscal Year 1994 (In Percent)

Hospital Group	Actual	Expected*	Percent Difference
All hospitals	20.1%	20.1%	—
Large urban	22.0	20.2	9.4%
Other urban	19.3	20.4	-5.4
Rural	17.0	19.5	-12.6
Major teaching	19.1	19.7	-3.2
Other teaching	20.4	20.4	-0.2
Non-teaching	20.2	20.0	0.9
Urban <100 beds	21.7	19.8	9.4
Urban 100-199 beds	22.6	20.4	10.9
Urban 200-299 beds	21.4	20.4	4.9
Urban 300-399 beds	20.7	20.4	1.7
Urban 400-499 beds	19.6	20.1	-2.3
Urban 500+ beds	18.8	20.1	-6.1
Rural <50 beds	17.3	18.1	-4.9
Rural 50-99 beds	17.3	19.4	-10.6
Rural 100-149 beds	17.6	20.3	-13.5
Rural 150-199 beds	16.5	20.0	-17.4
Rural 200+ beds	16.0	19.9	-19.3
New England	25.3	19.8	27.4
Middle Atlantic	19.8	19.4	2.1
South Atlantic	18.3	20.1	-9.2
East North Central	20.0	20.1	-0.5
East South Central	14.4	19.5	-26.4
West North Central	22.0	20.9	5.6
West South Central	18.2	20.4	-10.6
Mountain	23.6	20.9	12.7
Pacific	25.6	20.8	23.4
Voluntary	20.5	20.2	1.5
Proprietary	21.9	20.6	6.7
Urban government	17.4	19.6	-11.4
Rural government	15.9	19.1	-16.7

Note: Post-acute care services began within one day of PPS hospital discharge.

* Reflects national average post-acute care use, adjusted for each hospital's mix of cases.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

SERVICES FURNISHED BY POST-ACUTE CARE PROVIDERS

Various factors influence whether a Medicare beneficiary receives post-acute care and, if so, which provider is used. The severity of illness and the functional status of the patient are key considerations. The mix and timing of such care are also affected by the ease of moving the patient from the acute care hospital to a skilled nursing or rehabilitation facility, a long-term care hospital, or the patient's own residence for home health care.

To better understand the similarities and differences in patients using post-acute care providers and in these providers' treatment patterns, ProPAC's study documented the fiscal year 1994 experience of Medicare beneficiaries in skilled nursing and rehabilitation facilities, long-term care hospitals, and home health agencies. This part of the analysis included variables like prior hospitalization—whether there was one, how long it lasted, and DRG assignment—and how these were related to the care beneficiaries received. Only acute hospitalizations that ended within 30 days of the start of post-acute care provider use were considered.

Whether a beneficiary was hospitalized and the characteristics of the acute inpatient stay were related to the use of each type of post-acute care provider. Beneficiaries who, following a PPS hospital stay, were admitted to a rehabilitation facility or long-term care hospital or got home health care received more intensive services than those without a prior hospitalization. It appears, therefore, that the latter group was being treated for more chronic conditions.

Service use also differed by whether post-acute care was provided in a hospital-based or a free-standing facility. Patients who used post-acute care providers that were owned by a hospital had shorter post-acute stays or episodes, following shorter hospitalizations, than those who were treated in free-standing facilities. Hospital-based providers also were likelier than free-standing ones to treat beneficiaries who had been in the hospital.

These findings point to patient differences that may need to be considered in payment or coverage policies. They also highlight variations in treatment within the four categories of post-acute care providers that should be explored further. More definitive conclusions, however, will depend on having better indicators of patients' severity of illness and functional status, post-acute care service use, and outcomes. In the coming year, ProPAC will conduct additional analyses to better inform

decisions about Medicare payments and policies that affect these providers.

Skilled Nursing Facilities

Medicare beneficiaries receive an array of services from skilled nursing facilities, including nursing care and physical, occupational, and speech therapy as well as medical social services and pharmaceuticals. To qualify for payment, the patient must need skilled nursing or rehabilitative services on a daily basis after an inpatient stay.

In 1994, there were almost 1.2 million Medicare-covered stays in 13,507 Medicare-certified SNFs (see Table 4-11). About 78 percent of these facilities were free-standing. They accounted for two-thirds of all SNF stays, which averaged 33.6 days. The 1,814 hospital-based SNFs (13.4 percent of the total) accounted for 28.3 percent of beneficiary stays. At 16.7 days each, stays in these SNFs were about half as long as those in free-standing facilities. Covered SNF services were also provided by 1,212 rural hospitals that had Medicare-certified swing beds. Of all SNF stays, 5.0 percent were in these swing-bed hospitals. They averaged 11.4 days.

Across all SNFs, two-thirds of the Medicare patients were female, and three-quarters were 75 or older (see Table 4-12). A higher proportion of the patients treated in free-standing SNFs were the oldest old (85 and older): 37.0 percent, compared with 26.1 percent in hospital-based SNFs and 31.6 percent in swing-bed hospitals.

Before entering the SNF, patients had been hospitalized for a variety of conditions, though 20 DRGs accounted for nearly 60 percent of SNF stays (see Table 4-13). These DRGs were mostly for orthopedic procedures, strokes, heart failure, and pneumonia. The mix of patients by DRG was remarkably similar regardless of SNF type. While the order varied, the five highest-volume DRGs for patients in hospital-based, free-standing, and swing-bed facilities were the same, as were 18 of the top 20.

Variation in Length of Stay and Covered Days—Despite the similarity in patient mix, there were significant differences in previous inpatient length of stay and in the number of Medicare-covered days between hospital-based and free-standing SNFs (see Table 4-14). The average inpatient hospital stay for patients discharged to hospital-based SNFs was 10.0 days; for swing-bed hospitals, it was 8.0 days. By contrast, patients in free-standing SNFs had been hospitalized, on average, 11.6 days. Once admitted to the SNF, patients in free-standing facilities had twice as many Medicare-covered days as those in hospital-based SNFs. This was true across almost all DRGs.

The experience of almost 100,000 Medicare beneficiaries who were admitted to SNFs after an acute inpatient admission for major joint and limb procedures (DRG 209) is illustrative. About 49 percent were treated in free-standing facilities and 45 percent in hospital-based SNFs. Free-standing SNFs, on average, furnished 30.5 covered days of care following an acute hospitalization that lasted 9.1 days. By contrast, covered stays in hospital-based SNFs followed a shorter hospitalization, 6.6 days, and lasted fewer days, 12.5.

SNF Discharge Patterns—To better understand differences in patients across facilities, ProPAC

Table 4-11. Skilled Nursing Facilities and Beneficiary Use, by Facility Type, Fiscal Year 1994

Facility Type	Facilities		Stays*		Average Covered Days Per Stay
	Number	Percent of Total	Number	Percent of Total	
All SNFs	13,507	100.0%	1,176,915	100.0%	27.5
Free-standing	10,481	77.6	785,607	66.8	33.6
Hospital-based	1,814	13.4	332,550	28.3	16.7
Swing-bed hospitals	1,212	9.0	58,758	5.0	11.4

Note: SNF = skilled nursing facility.

* Due to missing and inaccurate data, these counts represent less than100 percent of the Medicare SNF stays for fiscal year 1994.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Table 4-12. Characteristics of Beneficiaries Using Skilled Nursing Facilities, by Facility Type, Fiscal Year 1994 (In Percent)

Characteristic	All SNFs	Free-Standing	Hospital-Based	Swing-Bed Hospital
Female	66.0%	66.7%	65.0%	63.2%
Male	34.0	33.3	35.0	36.8
Age				
<65	4.0	3.4	5.2	3.9
65-74	21.0	18.4	27.0	21.9
75-84	41.3	41.1	41.7	42.6
85+	33.7	37.0	26.1	31.6
Medicare status				
Aged	95.0	95.5	93.9	95.9
Disabled	3.5	3.0	4.6	3.7
ESRD	1.5	1.5	1.6	0.4

Note: SNF = skilled nursing facility. ESRD = end-stage renal disease.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

also looked at SNF discharge patterns within the 30-day window. The analysis found that almost 30 percent of Medicare SNF patients had stays that lasted at least 30 days (see Table 4-15). This varied significantly, though, by the type of SNF. While nearly 40 percent of the patients in free-standing facilities were still there after 30 days, less than 12 percent in hospital-based SNFs had stays lasting 30 days or more. This may be because patients in free-standing SNFs were older and perhaps frailer.

Some beneficiaries received other post-acute services after their SNF stay, most commonly home health care (12.6 percent). Home health care use varied by SNF type, however. Of all Medicare patients with a hospital-based SNF stay, 24.1 percent received home health care, compared with 16.7 percent in swing-bed hospitals and 7.0 percent in free-standing facilities. Almost 10 percent of the beneficiaries in SNFs went back to an acute care hospital within 30 days of their original discharge. Finally, 7.6 percent died while they were in the SNF, and 34.6 percent used no other post-acute care provider.

Rehabilitation Hospitals and Distinct-Part Units

Rehabilitation facilities—whether free-standing hospitals or distinct-part units within acute care hospitals—generally provide intensive physical, occupational, and speech therapy to patients with functional disabilities resulting from physical illness or injury. For these services to be covered, Medicare requires that beneficiaries have a minimum of three hours of therapy daily during their stay. Medicare also stipulates that at least 75 percent of the facility's inpatients are being treated for one of 10 specific conditions, most of which are related to musculoskeletal and neurological disorders.[8] Increasingly, however, these facilities are treating patients who need rehabilitation services for cardiac and pulmonary conditions.

The vast majority of Medicare patients admitted to rehabilitation facilities in 1994 had been in a PPS hospital within 30 days (see Table 4-16). About 84 percent of those in rehabilitation hospitals and 88 percent in hospital-based units had a prior acute inpatient stay. A slightly larger percentage in urban rehabilitation facilities had a prior PPS hospital admission compared with those in rural ones. Voluntary rehabilitation hospitals and distinct-part units treated a larger share of beneficiaries who had been hospitalized than did their proprietary and government counterparts.

Patient Characteristics—The characteristics of Medicare patients discharged from a PPS hospital to a rehabilitation facility differed from those without a prior inpatient stay (see Table 4-17). Patients with a prior hospitalization were older. Among those who had not been hospitalized, a larger percentage were under 65 and had qualified for Medicare because of a disability or end-stage renal disease.

Beneficiaries with a prior acute inpatient stay were concentrated in relatively few DRGs (see Table 4-18). Indeed, 15 DRGs accounted for almost 60 percent of total admissions to rehabilitation hospitals and 63 percent to distinct-part units. All but four DRGs represented major hip and other joint replacements and procedures, bone fractures, amputations, back problems, and strokes. The largest volume of patients, however, had been assigned to only three DRGs: those for major joint and limb procedures (DRG 209), stroke (DRG 14), and hip and femur procedures (DRG 210).

Service Use—Medicare beneficiaries in rehabilitation hospitals received a mix of therapy services

Table 4-13. DRGs With Highest Volume of Beneficiaries Using Skilled Nursing Facilities, Fiscal Year 1994

DRG	Description	SNF Stays	Percent of Total
209	Major joint and limb reattachment procedure of lower extremity	99,791	8.5%
14	Specific cerebrovascular disorders except TIA	90,450	7.7
210	Hip and femur procedures except major joint, age >17 with CC	76,301	6.5
127	Heart failure and shock	57,863	4.9
89	Simple pneumonia and pleurisy, age >17 with CC	57,494	4.9
79	Respiratory infections and inflammations, age >17 with CC	43,499	3.7
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	38,332	3.3
320	Kidney and urinary tract infections, age >17 with CC	31,469	2.7
416	Septicemia, age >17	30,669	2.6
88	Chronic obstructive pulmonary disease	22,560	1.9
174	Gastrointestinal hemorrhage with CC	21,048	1.8
148	Major small and large bowel procedures with CC	20,094	1.7
239	Pathological fractures and musculoskeletal and connective tissue malignancy	16,492	1.4
236	Fractures of hip and pelvis	16,134	1.4
113	Amputation for circulatory system disorders except upper limb and toe	14,877	1.3
243	Medical back problems	14,819	1.3
121	Circulatory disorders with AMI and cardiovascular complication, discharged alive	14,814	1.3
182	Esophagitis, gastroenterology, and miscellaneous digestive disorders, age >17 with CC	13,794	1.2
15	Transient ischemic attack and precerebral occlusions	12,343	1.0
468	Extensive operating room procedure unrelated to principal diagnosis	11,408	1.0
Total		704,251	59.8

Note: DRGs were assigned during PPS hospital stay. SNF services began within 30 days of PPS hospital discharge. DRG = diagnosis-related group. SNF = skilled nursing facility. TIA = transient ischemic attack. AMI = acute myocardial infarction. CC = complication and/or comorbidity

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

similar to regimens of those treated in rehabilitation units (see Table 4-19). On average, though, a slightly higher percentage of total Medicare-covered charges for patients in rehabilitation hospitals was for therapy, whether or not the patients had a prior hospital stay.

Despite an apparently similar service mix across patient and facility types, length of stay differed markedly. Beneficiaries admitted to free-standing rehabilitation hospitals after an acute inpatient admission stayed longer than those who went to hospital-based units. This pattern was consistent across all the DRGs examined. They also had stayed in the PPS hospital longer before being transferred to the rehabilitation hospital.

Medicare beneficiaries without a prior acute inpatient admission stayed in the rehabilitation setting 3.7 days longer, on average, than those with a previous hospitalization. This may have been because they were disabled and needed services for more chronic types of conditions. As was true of those with a prior hospital stay, patients treated in rehabilitation hospitals had longer stays than those treated in distinct-part units.

Long-Term Care Hospitals

Long-term care hospitals are a diverse group of facilities that provide a wide range of services to a variety of patients. The only defining characteristic under Medicare certification rules is that the average inpatient stay in these hospitals must exceed 25 days. Some of these facilities specialize in physical rehabilitation or in treating ventilator-dependent patients. Others provide more generalized services like cancer treatment, pain management, and chronic disease care.

About 72 percent of Medicare beneficiaries treated in long-term care hospitals in 1994 had a PPS hospital stay within 30 days preceding their admission (see Table 4-20). Urban long-term care hospitals treated a larger percentage of patients who had previously been hospitalized than did rural ones. Among ownership types,

Table 4-14. Hospital Length of Stay and Skilled Nursing Facility Use for Selected DRGs, by Facility Type, Fiscal Year 1994

DRG	Description	All SNFs		Free-Standing		Hospital-Based		Swing-Bed Hospital	
		Hospital LOS	Covered Days	Hospital LOS	Covered Days	Hospital LOS	Covered Days	Hospital LOS	Covered Days
All DRGS		10.9	27.5	11.6	33.6	10.0	16.7	8.0	11.4
209	Major joint and limb reattachment procedure of lower extremity	7.9	21.0	9.1	30.5	6.6	12.5	7.2	11.1
14	Specific cerebrovascular disorders except TIA	10.7	32.9	11.9	39.9	8.7	19.8	7.2	12.7
210	Hip and femur procedures except major joint, age >17 with CC	9.3	33.4	10.0	40.8	8.1	19.7	7.9	15.7
127	Heart failure and shock	10.1	24.5	10.4	28.8	9.7	15.1	7.7	10.0
89	Simple pneumonia and pleurisy, age >17 with CC	9.7	25.6	10.1	30.6	9.0	15.0	7.5	8.6
79	Respiratory infections and inflammations, age >17 with CC	11.9	27.8	12.4	33.1	11.1	16.5	8.9	9.7
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	9.4	31.5	9.8	36.2	8.4	17.6	7.4	11.6
320	Kidney and urinary tract infection, age >17 with CC	8.9	32.2	9.2	36.1	8.0	18.0	6.8	11.0
416	Septicemia, age >17	11.5	28.6	12.0	33.8	10.4	16.7	8.8	10.3
88	Chronic obstructive pulmonary disease	9.5	22.9	10.0	28.3	9.1	14.2	7.2	9.2
174	Gastrointestinal hemorrhage with CC	9.0	28.3	9.1	32.1	9.2	17.1	7.7	9.7
148	Major small and large bowel procedures with CC	18.8	23.7	20.1	29.9	17.5	15.8	14.2	11.5
239	Pathological fractures and musculoskeletal and connective tissue malignancy	8.6	24.1	9.6	30.4	7.5	16.5	6.4	11.4
236	Fractures of hip and pelvis	7.3	27.5	8.0	34.2	6.3	17.4	6.1	12.9
113	Amputation for circulatory system disorders except upper limb and toe	15.1	33.9	15.6	39.6	14.3	22.4	12.1	15.8
243	Medical back problems	7.5	23.2	8.5	30.7	6.5	14.5	5.7	9.6
121	Circulatory disorders with AMI and cardiovascular complication, discharged alive	12.3	23.0	12.8	27.4	11.8	14.5	9.1	8.9
182	Esophagitis, gastroenterology and miscellaneous digestive disorders, age >17 with CC	9.3	28.2	9.6	33.2	9.1	16.3	6.8	9.7
15	Transient ischemic attack and precerebral occlusions	8.5	31.2	9.1	36.7	7.2	17.5	6.5	11.2
468	Extensive operating room procedure unrelated to principal diagnosis	21.2	28.9	22.4	34.2	18.9	18.8	16.9	15.9

Note: DRGs were assigned during PPS hospital stay. SNF services began within 30 days of PPS hospital discharge. DRG = diagnosis-related group. SNF = skilled nursing facility. LOS = length of stay. TIA = transient ischemic attack. AMI = acute myocardial infarction. CC = complication and/or comorbidity.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

proprietary long-term care hospitals had the highest proportion of beneficiaries with a prior PPS hospital stay.

Patient Characteristics—Medicare patients without a previous acute care stay who were treated in long-term care hospitals were considerably younger, on average, than those who were admitted after an acute hospitalization (see Table 4-21). A substantially larger proportion of these patients were under 65 and disabled relative to those with a prior acute stay. Regardless of prior hospitalization status, slightly more patients in long-term care hospitals were female.

Table 4-15. Medicare Skilled Nursing Facility Patients' Experience 30 Days After PPS Hospital Discharge, by Facility Type, Fiscal Year 1994 (In Percent)

Experience	All SNFs	Free-Standing	Hospital-Based	Swing-Bed Hospital
Still a SNF patient	29.5%	39.6%	11.6%	5.7%
Received post-acute care from:				
Home health agency	12.6	7.0	24.1	16.7
Rehabilitation facility	0.9	0.2	2.3	1.3
Another SNF	4.4	2.2	7.9	11.4
Other[a]	0.5	0.2	1.1	1.1
Returned to PPS hospital	9.9	9.8	9.7	12.3
Died while in the SNF	7.6	8.0	6.8	7.6
Received no other post-acute care[b]	34.6	33.1	36.4	44.1
Total	100.0	100.0	100.0	100.0

Note: SNF = skilled nursing facility.

[a] Includes patients admitted to long-term care hospitals and those who received care from several post-acute care providers.

[b] These beneficiaries may have received services in other settings, like hospital outpatient departments and comprehensive outpatient rehabilitation facilities.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

Compared with Medicare beneficiaries admitted to rehabilitation and skilled nursing facilities, those who went to long-term care hospitals after an acute inpatient stay had a wider range of medical conditions (see Table 4-22). The largest number of patients had been assigned to DRGs for tracheostomy (DRG 483), stroke (DRG 14), and major joint and limb procedures (DRG 209).

Table 4-16. Rehabilitation Facilities and Beneficiary Use, by Facility Type, Fiscal Year 1994

	Facilities		Discharges		Percent With Prior PPS Hospital Admission[a]
Facility Type	Number	Percent of Total	Number	Percent of Total	
Rehabilitation hospitals	204	100.0%	101,164	100.0%	84.4%
Urban	187	91.7	94,861	93.8	84.6
Rural	17	8.3	6,303	6.2	81.2
Proprietary	127	62.3	56,465	55.8	83.5
Voluntary	68	33.3	42,220	41.7	85.9
Government	9	4.4	2,479	2.5	78.1
Rehabilitation units[b]	864	100.0	193,590	100.0	88.0
Urban	740	85.6	173,936	89.8	88.2
Rural	124	14.4	19,654	10.2	86.7
Proprietary	111	12.8	20,378	10.5	86.1
Voluntary	629	72.8	153,079	79.1	88.5
Government	124	14.4	20,133	10.4	86.3

[a] Rehabilitation facility services began within 30 days of PPS hospital discharge.

[b] Four rehabilitation units accounting for 227 discharges were not included due to missing data.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Table 4-17. Characteristics of Beneficiaries Using Rehabilitation Facilities, by Facility Type, Fiscal Year 1994

Characteristic	All Rehabilitation Discharges	Hospitals		Distinct-Part Units	
		Prior PPS Hospital Admission*	No Prior PPS Hospital Admission	Prior PPS Hospital Admission*	No Prior PPS Hospital Admission
Female	62.5%	63.5%	59.5%	62.7%	59.3%
Male	37.5	36.5	40.5	37.3	40.7
Age					
<65	7.6	6.5	16.2	6.6	13.5
65-74	36.6	37.0	34.7	36.7	36.5
75-84	41.3	42.3	36.5	41.8	37.4
85+	14.4	14.3	12.6	14.9	12.7
Medicare status					
Aged	92.4	93.5	83.8	93.4	86.5
Disabled	7.2	6.2	15.8	6.2	12.8
ESRD	0.4	0.3	0.4	0.4	0.7

Note: Columns may not sum to 100 due to rounding or missing data. ESRD = end-stage renal disease.

* Rehabilitation facility services began within 30 days of PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

These three DRGs accounted for 21 percent of all previously hospitalized patients in these facilities. DRGs for hip and femur procedures, pulmonary diseases and infections, and heart failure were also prevalent.

Service Use—Therapy charges as a percentage of total Medicare-covered charges for beneficiaries without an acute inpatient stay were substantially lower than for patients who had been hospitalized (see Table 4-23). This is probably because a larger

Table 4-18. DRGs With Highest Volume of Beneficiaries Using Rehabilitation Facilities, Fiscal Year 1994

DRG	Description	Hospitals		Distinct-Part Units	
		Discharges	Percent of Total	Discharges	Percent of Total
209	Major joint and limb reattachment procedure of lower extremity	20,484	20.3%	38,982	20.1%
14	Specific cerebrovascular disorders except TIA	16,927	16.7	39,378	20.3
210	Hip and femur procedures except major joint, age >17 with CC	7,237	7.2	14,101	7.3
113	Amputation for circulatory system disorders except upper limb and toe	2,091	2.1	4,683	2.4
214	Back and neck procedures with CC	1,817	1.8	3,764	1.9
1	Craniotomy, age >17 except for trauma	1,604	1.6	3,620	1.9
211	Hip and femur procedures except major joint, age >17 with CC	1,317	1.3	2,549	1.3
15	Transient ischemic attack and precerebral occlusions	1,119	1.1	2,441	1.3
483	Tracheostomy except for face, mouth, and neck diagnoses	1,119	1.1	1,850	1.0
243	Medical back problems	1,092	1.1	1,766	1.0
106	Coronary bypass with cardiac catheterization	1,080	1.1	1,644	0.8
127	Heart failure and shock	993	1.0	1,860	1.0
236	Fractures of hip and pelvis	969	1.0	1,863	1.0
468	Extensive operating room procedure unrelated to principal diagnosis	965	1.0	1,950	1.0
471	Bilateral or multiple major joint procedures of lower extremity	900	0.9	1,962	1.0
Total		59,714	59.0	122,413	63.2

Note: DRGs were assigned during PPS hospital stay. Rehabilitation facility services began within 30 days of PPS hospital discharge. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Table 4-19. Therapy Charges and Length of Stay in Rehabilitation Facilities, by Selected DRGs, Fiscal Year 1994

DRG* Facility Type	Percent of Total Charges from Therapy	Share of Total Therapy Charges				Average Length of Stay	
		Physical	Occupational	Speech	Respiratory	Rehabilitation Facility	PPS Hospital
All DRGs							
Rehabilitation hospitals	35.0%	47.0%	38.9%	7.9%	6.3%	19.5	11.2
Distinct-part unit	31.0	49.3	38.7	7.7	4.3	17.1	10.5
DRG 14 Specific cerebrovascular disorders except TIA							
Rehabilitation hospitals	37.0	38.3	37.5	20.4	4.3	24.4	9.3
Distinct-part unit	34.0	42.3	37.1	17.8	2.8	21.0	8.2
DRG 113 Amputation for circulatory system disorders except upper limb and toe							
Rehabilitation hospitals	30.0	52.2	41.7	1.6	4.8	22.2	17.4
Distinct-part unit	27.0	54.6	40.5	1.6	3.4	19.5	16.4
DRG 209 Major joint and limb reattachment procedures of lower extremity							
Rehabilitation hospitals	35.0	55.9	40.4	0.9	2.8	14.4	7.7
Distinct-part unit	31.0	56.5	39.9	1.2	2.4	12.8	7.2
DRG 210 Hip and femur procedures except major joint, age >17 with CC							
Rehabilitation hospitals	34.0	52.0	41.3	1.9	4.8	19.6	9.3
Distinct-part unit	30.0	53.3	41.0	1.9	3.8	16.9	8.9
No prior PPS hospital stay							
Rehabilitation hospitals	34.0	46.3	39.6	8.2	6.2	23.2	—
Distinct-part unit	30.0	48.6	37.8	8.4	5.3	20.8	—

Note: DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

* DRGs were assigned during PPS hospital stay. Rehabilitation facility services began within 30 days of PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Table 4-20. Long-Term Care Hospitals and Beneficiary Use, by Hospital Type, Fiscal Year 1994

Hospital Type	Hospitals		Discharges		Percent With Prior PPS Hospital Admission*
	Number	Percent of Total	Number	Percent of Total	
All long-term care hospitals	140	100.0%	32,335	100.0%	71.8%
Urban	128	91.4	31,039	96.0	72.2
Rural	12	8.6	1,296	4.0	60.9
Proprietary	51	36.4	9,037	27.9	82.7
Voluntary	42	30.0	13,256	41.0	76.3
Government	47	33.6	10,042	31.1	56.0

Note: Eight long-term care hospitals accounting for 165 discharges are not included due to missing data.

* Long-term care hospital services began within 30 days of PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

proportion of these beneficiaries were under 65 and disabled, suggesting they were receiving services for chronic conditions, which usually require fewer therapy services.

Respiratory therapy charges accounted for more than a third of all therapy charges in long-term care hospitals. Indeed, seven of the top 15 DRGs for patients in long-term care hospitals were related to pulmonary and cardiac conditions. Therapy services, primarily respiratory therapy, accounted for 63 percent of charges for patients admitted to long-term care hospitals after a tracheostomy (DRG 483), for example.

Overall, the average length of stay in long-term care hospitals was 32.3 days. However, average stays ranged from 43.7 days for beneficiaries who had been hospitalized after a tracheostomy to 20.0 days for those recuperating from major joint and limb procedures.

Home Health Agencies

Home health agencies provide nursing, rehabilitation, and therapy services to beneficiaries who are homebound and require part-time or intermittent skilled nursing care or physical or speech therapy. If these conditions are met, beneficiaries may also receive occupational therapy, medical social services, and aide services. Medicare's home health care benefit has no copayment, deductible, or pre-hospitalization requirements.

Table 4-21. Characteristics of Beneficiaries Using Long-Term Care Hospitals, Fiscal Year 1994 (In Percent)

Characteristic	All Long-Term Care Hospital Discharges	Prior PPS Hospital Admission*	No Prior PPS Hospital Admission
Female	56.4%	57.3%	54.1%
Male	43.6	42.7	45.9
Age			
<65	15.6	11.0	27.3
65-74	33.1	35.1	28.0
75-84	35.7	38.3	29.0
85+	15.7	15.6	15.7
Medicare status			
Aged	84.4	89.0	72.7
Disabled	15.1	10.5	26.9
ESRD	0.4	0.5	0.4

Note: Columns may not sum to 100 due to rounding or missing data. ESRD = end-stage renal disease.

* Long-term care hospital services began within 30 days of PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Home health agencies are the most frequently used post-acute care provider in the Medicare program. In 1994, they delivered 2.5 million episodes of care to Medicare beneficiaries.[9] Nearly two-thirds of the 7,410 home health agencies were located in urban areas. They furnished nearly 80 percent of all episodes (see Table 4-24). Almost half of all home health agencies were proprietary. They provided about 35 percent of the episodes. Though less than 8 percent of all agencies were visiting nurse associations, they accounted for more than 20 percent of all home health episodes.

While patients in other post-acute settings were usually discharged from an acute care hospital, only 59 percent of all home health episodes were preceded by a PPS hospital stay. This proportion varied across agency types. Proprietary free-standing agencies were the least likely to treat patients who had been hospitalized, whereas hospital-based ones were the most likely to do so.

A larger share of beneficiaries who had a home health episode without a prior hospitalization were either under 65 (reflecting the slightly higher proportion of disabled patients) or 85 and older (see Table 4-25). Differences between the beneficiaries who received home health care with and without a prior hospitalization were not large.

Service Use—Patients who had been hospitalized within 30 days of a home health episode had an average inpatient stay of 9.6 days (see Table 4-26). They had both shorter periods of home health care and fewer visits, on average, than those who had not been hospitalized. A slightly higher proportion of these visits were for skilled nursing services, however, suggesting that they got more intensive services than beneficiaries who had not been hospitalized.

Beneficiaries who began receiving home health services within one day of their hospital discharge had even shorter episodes and a higher proportion of skilled nursing visits. A sizable share who got home health services later in the 30-day window

Table 4-22. DRGs With Highest Volume of Beneficiaries Using Long-Term Care Hospitals, Fiscal Year 1994

DRG	Description	Discharges	Percent of Total
483	Tracheostomy except for face, mouth, and neck diagnoses	2,547	7.8%
14	Specific cerebrovascular disorders except TIA	2,523	7.8
209	Major joint and limb reattachment procedure of lower extremity	1,857	5.7
210	Hip and femur procedures except major joint, age >17 with CC	1,079	3.3
88	Chronic obstructive pulmonary disease	731	2.2
475	Respiratory system diagnosis with ventilator support	672	2.1
127	Heart failure and shock	603	1.9
79	Respiratory infections and inflammations, age >17 with CC	587	1.8
89	Simple pneumonia and pleurisy, age >17 with CC	411	1.3
113	Amputation for circulatory system disorders except upper limb and toe	401	1.2
416	Septicemia, age >17	326	1.0
148	Major small and large bowel procedures with CC	325	1.0
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	315	1.0
106	Coronary bypass with cardiac catheterization	312	1.0
468	Extensive operating room procedure unrelated to principal diagnosis	295	1.0
Total		12,984	40.0

Note: DRGs were assigned during PPS hospital stay. Long-term care hospital services began within 30 days PPS hospital discharge. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

may have first received post-acute care from another type of provider. Thus, the other provider (most often a SNF) probably met more of the intensive care needs of these beneficiaries.

The 10 most frequent DRGs for beneficiaries who received home health care following a PPS hospitalization accounted for 38 percent of the post-hospital episodes, or 22 percent of all

Table 4-23. Therapy Charges and Length of Stay in Long-Term Care Hospitals, by Selected DRGs, Fiscal Year 1994

DRG*	Percent of Total Charges from Therapy	Share of Total Therapy Charges				Average Length of Stay	
		Physical	Occupational	Speech	Respiratory	Long-Term Care Hospital	PPS Hospital
All DRGs	29.0%	36.9%	24.9%	5.0%	33.1%	28.6	16.8
DRG 14 Specific cerebrovascular disorders except TIA	31.0	40.9	35.0	16.5	7.8	29.5	10.6
DRG 209 Major joint and limb reattachment procedures of lower extremity	29.0	56.3	38.4	1.5	3.8	20.0	8.8
DRG 210 Hip and femur procedures except major joint, age >17 with CC	27.0	52.1	37.2	2.6	8.0	28.1	10.5
DRG 483 Tracheostomy except for face, mouth, and neck diagnoses	63.0	8.8	4.7	2.9	84.9	43.7	36.9
No prior PPS hospital stay	15.0	33.8	26.0	5.2	35.5	41.7	—

Note: DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complication and/or comorbidity.

* DRGs were assigned during PPS hospital stay. Long-term care hospital services began within 30 days of PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR data from the Health Care Financing Administration.

Table 4-24. Home Health Agencies and Beneficiary Use, by Agency Type Fiscal Year 1994

Agency Type	Agencies		Episodes[a]		Percent With Prior PPS Hospital Admission[b]
	Number	Percent of Total	Number	Percent of Total	
All agencies	7,410	100.0%	2,512,250	100.0%	59.0%
Urban	4,625	62.4	1,948,430	77.6	59.9
Rural	2,785	37.6	563,820	22.4	55.9
Hospital-based	2,149	29.0	869,155	34.6	65.1
Visiting nurse association	551	7.5	507,935	20.2	60.1
Proprietary	3,515	47.4	884,065	35.2	53.2
Government	1,086	14.7	233,895	9.3	56.3
Other[c]	109	1.4	17,200	0.7	54.3

[a] Episodes are a series of visits preceded and followed by a 60-day period without home health use.

[b] Home health episodes began within 30 days of PPS hospital discharge.

[c] Includes agencies based in rehabilitation and skilled nursing facilities.

SOURCE: ProPAC analysis of home health claims data and Provider of Service files from the Health Care Financing Administration.

episodes. Patterns of home health use and length of episode varied greatly across the DRGs (see Table 4-27). Shorter hospital stays were associated with longer home health episodes, which tended to have a higher proportion of aide visits. Beneficiaries hospitalized for major joint and limb procedures (DRG 209), however, tended to have short hospital stays and home health episodes and received a high proportion of therapy services.

Agency Differences—Home health agencies may specialize in treating certain types of patients or have different practice protocols, depending on their affiliation with a hospital and other factors. Beneficiaries who received services from hospital-based agencies had shorter than average hospitalizations and home health episodes, even after controlling for DRG differences (see Table 4-28). They also appeared to receive more intensive services than their counterparts who were treated in other types of facilities, as evidenced by a smaller proportion of aide visits.

Beneficiaries who used proprietary agencies also tended to have slightly shorter prior hospital stays. Their episodes included more aide visits and fewer therapy services, suggesting they may have been less severely ill. Additionally, their episodes lasted longer and entailed more visits per episode than in the other agency categories. The extent to which these findings reflect variation in the kinds of patients treated by type of agency or different treatment patterns is not known.

Table 4-25. Characteristics of Beneficiaries Using Home Health Agencies, Fiscal Year 1994 (In Percent)

Characteristic	All Home Health Episodes	Prior PPS Hospital Admission*	No Prior PPS Hospital Admission
Female	64.2%	62.1%	67.2%
Male	35.9	37.9	32.9
Age			
<65	9.0	8.7	9.4
65-74	32.4	36.1	27.0
75-84	40.5	40.2	41.0
85+	18.1	15.0	22.7
Medicare status			
Aged	92.0	92.3	91.6
Disabled	6.5	6.0	7.2
ESRD	1.5	1.7	1.2

Note: Episodes are a series of visits preceded and followed by a 60-day period without home health use. ESRD = end-stage renal disease.

* Home health episodes began within 30 days PPS hospital discharge.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

OVERLAP AMONG POST-ACUTE SETTINGS

In 1994, almost a quarter of all Medicare beneficiaries with a PPS hospitalization received care from a post-acute care provider within 30 days of

Table 4-26. Beneficiary Use of Home Health Services, by Prior PPS Hospital Admission, Fiscal Year 1994

Episode Type	Average Length (In Days)		Visits		
	PPS Hospital Stay	Home Health Episode*	Average	Percent Skilled Nursing	Percent Aide
No prior PPS hospital admission	—	106.5	61.6	59.2%	23.5%
Episode began within:					
1 day of PPS hospital discharge	10.1	75.8	44.3	67.6	19.4
30 days of PPS hospital discharge	9.6	77.5	43.4	62.4	19.3

* Episodes are a series of visits preceded and followed by a 60-day period without home health use.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

discharge. About 11.6 percent got only home health care and 8.9 percent only SNF care, while 1.4 percent used both services (see Table 4-29). Another 1.3 percent went to a rehabilitation facility and less than 1 percent received services in a long-term care hospital.

Although there was significant overlap in the hospital-assigned DRGs across settings, other patient characteristics, such as medical complexity or functional status, may influence which patients use a particular site. PPS hospital length of stay varied among the post-acute care users, indicating differences in patient severity. Beneficiaries who subsequently used long-term care hospital services had PPS stays that averaged close to 17 days, compared with about 11 days for SNF and rehabilitation facility users and fewer than 10 days for those using home health care. Also suggestive of patient differences is the finding that beneficiaries cared for in SNFs tended to be older than those using rehabilitation facilities or home health agencies. In

Table 4-27. DRGs With Highest Volume of Beneficiaries Using Home Health Services, Fiscal Year 1994

DRG	Description	Percent of All Post-Hospital Episodes*	Average Length (In Days)		Visits		
			PPS Hospital Stay	Home Health Episode*	Average	Percent Skilled Nursing	Percent Aide
209	Major joint and limb reattachment procedure of lower extremity	9.6%	7.4	49.6	29.3	29.5%	15.1%
127	Heart failure and shock	6.6	8.2	95.0	45.8	72.5	20.3
14	Specific cerebrovascular disorders except TIA	4.4	8.0	92.1	58.0	45.0	19.4
89	Simple pneumonia and pleurisy, age >17 with CC	3.5	9.0	85.7	43.4	69.3	21.4
88	Chronic obstructive pulmonary disease	3.1	8.2	94.4	45.7	71.7	20.9
148	Major small and large bowel procedures with CC	2.8	15.6	67.6	40.8	76.1	18.4
210	Hip and femur procedures except major joint, age >17 with CC	2.3	9.7	77.3	50.8	30.2	23.1
106	Coronary bypass with cardiac catheterization	2.1	14.0	55.5	31.0	77.6	15.0
121	Circulatory disorders with AMI and cardiovascular complication, discharged alive	1.9	10.6	86.2	41.4	71.9	20.2
296	Nutritional and miscellaneous metabolic disorders, age >17 with CC	1.7	7.9	85.1	49.2	63.1	24.8

Note: DRGs were assigned during PPS hospital stay. Home health episodes began within 30 days of PPS hospital discharge. DRG = diagnosis-related group. TIA = transient ischemic attack. CC = complications and/or comorbidity. AMI = acute myocardial infarction.

* Episodes are a series of visits preceded and followed by a 60-day period without home health use.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

Table 4-28. Variation in Use of Medicare Home Health Services, by Agency Type, Fiscal Year 1994

DRG[a]/ Agency Type	Average Length (In Days)		Visits		
	PPS Hospital Stay	Home Health Episode[b]	Average	Percent Skilled Nursing	Percent Aide
All DRGs	9.6	77.5	43.4	62.4%	19.3%
Hospital-based	9.2	71.4	35.6	63.8	16.9
Visiting nurse association	10.5	74.1	38.8	64.0	18.3
Proprietary	9.5	85.9	56.1	60.0	22.1
Government	9.5	81.6	42.7	62.1	21.5
Urban	9.8	73.8	42.6	61.8	18.7
Rural	8.8	91.2	46.4	64.8	21.7
DRG 14 Specific cerebrovascular disorders except TIA	8.0	92.1	58.0	45.0	19.4
Hospital-based	7.5	83.2	46.2	45.9	16.7
Visiting nurse association	9.0	84.8	51.0	45.8	18.0
Proprietary	7.9	104.1	76.0	43.5	22.5
Government	8.3	102.8	58.6	45.4	22.1
Urban	8.2	85.8	56.3	44.0	18.3
Rural	7.5	114.5	63.9	48.7	23.3
DRG 127 Heart failure and shock	8.2	95.0	45.8	72.5	20.3
Hospital-based	7.9	90.1	38.4	75.1	17.6
Visiting nurse association	9.0	88.8	39.7	72.9	19.8
Proprietary	8.0	105.8	60.4	69.3	23.1
Government	8.0	96.2	42.9	71.9	22.3
Urban	8.4	89.9	44.7	72.1	19.9
Rural	7.5	115.7	50.6	73.9	21.9
DRG 209 Major joint and limb reattachment procedure of lower extremity	7.4	49.6	29.3	29.5	15.1
Hospital-based	7.1	44.9	24.4	29.0	13.2
Visiting nurse association	7.9	52.4	28.7	28.8	13.7
Proprietary	7.3	53.6	36.0	30.0	17.6
Government	7.9	51.4	28.7	31.5	17.6
Urban	7.4	48.7	29.2	27.6	14.4
Rural	7.5	53.1	29.8	36.3	17.9

Note: DRG = diagnosis-related group. TIA = transient ischemic attack.

[a] DRGs were assigned during PPS hospital stay. Home health episodes began within 30 days of PPS hospital discharge.

[b] Episodes are a series of visits preceded and followed by a 60-day period without home health use.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

addition, inasmuch as many of these beneficiaries (almost 30 percent) were still in the SNF 30 days after being discharged from the hospital, they probably were also sicker than the others.

The more than 345,000 patients who were hospitalized in 1994 for a stroke (DRG 14) illustrate the variety of post-acute treatment sites and prior service use (see Table 4-30). Almost 20 percent used only SNF care during the 30-day period following their PPS hospital discharge, 9.5 percent received only rehabilitation facility services, and 9.2 percent got care from more than one post-acute care provider. The rest used home health services or were treated in a long-term care hospital. Finally, almost half the beneficiaries hospitalized with a stroke used none of these providers.

Factors Affecting Setting Choice for Post-Acute Care

Many factors influence where a patient receives post-acute care. For Medicare beneficiaries, this decision often reflects the program's payment and

Table 4-29. Use of Post-Acute Care Providers After PPS Hospital Discharge, Fiscal Year 1994

Experience	Percent of Total
Overall	100.0%
No post-acute care*	69.9
Received post-acute care from:	
Home health agency only	11.6
Skilled nursing facility only	8.9
Skilled nursing facility and home health agency	1.4
Rehabilitation facility only	1.3
Home health agency and rehabilitation facility	0.8
Skilled nursing facility and rehabilitation facility	0.3
Long-term care hospital only	0.2
Other combinations	0.1
Died in PPS hospital	5.6

Note: Post-acute care services began within 30 days of PPS hospital discharge.

* Patients may have returned to an acute care hospital or received post-acute care in other settings, like hospital outpatient departments and comprehensive outpatient rehabilitation facilities.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

coverage policies for these services. Some beneficiaries may not meet the three-hour minimum therapy requirement for admission to a rehabilitation hospital, for instance. Likewise, some patients who need skilled nursing care but do not have a qualifying prior acute care stay may use home health care instead.

Despite differences in Medicare payment and coverage policies for each of the post-acute care providers, their services overlap considerably. Though their traditional role has been to serve patients needing skilled nursing care, SNFs have expanded their service menu partly because of Medicare's generous cost-based payments. Increasingly, they are offering more intensive therapy and rehabilitative services. As for home health agencies, Medicare places few restrictions on the volume of therapy, nursing, or aide services. This type of care may be attractive to many beneficiaries who would rather avoid inpatient care.

Other clinical, organizational, and financial factors affect the settings in which Medicare beneficiaries are cared for after an acute inpatient stay.

Table 4-30. Use of Post-Acute Care Providers After PPS Hospital Discharge, by Selected DRGs, Fiscal Year 1994

DRG	Description	Volume	Beneficiaries Used Only: SNF	Rehabilitation Facility	Home Health Agency	Long-Term Care Hospital	More Than One Provider	No Post-Acute Care*
14	Specific cerebrovascular disorders except TIA	345,260	19.8%	9.5%	12.3%	0.5%	9.2%	48.7%
113	Amputation for circulatory system disorders except upper limb and toe	43,745	29.1	9.9	9.5	0.7	7.6	43.2
209	Major joint and limb reattachment procedure of lower extremity	318,614	18.8	8.6	25.5	0.3	20.4	26.4
210	Hip and femur procedures except major joint, age >17 with CC	136,534	42.4	6.6	11.1	0.5	16.9	22.6
211	Hip and femur procedures except major joint, age >17 without CC	24,049	33.9	6.8	16.5	0.4	18.3	24.1
236	Fractures of hip and pelvis	39,407	31.0	3.3	14.9	0.2	11.2	39.3
471	Bilateral or multiple major joint procedures of lower extremity	8,772	12.3	14.7	23.1	0.4	29.9	19.7
482	Tracheostomy for face, mouth, and neck diagnoses	7,222	11.0	0.7	44.8	0.6	4.1	38.7
483	Tracheostomy except for face, mouth, and neck diagnoses	35,985	17.0	5.3	8.9	6.5	5.2	57.2
485	Limb reattachment, hip and femur procedures for multiple significant trauma	3,046	40.6	7.6	9.6	0.7	15.8	25.8

Note: DRGs were assigned during PPS hospital stay. Post-acute services began within 30 days of PPS hospital discharge. DRG = diagnosis-related group. SNF = skilled nursing facility. TIA = transient ischemic attack. CC = complications and/or comorbidity.

* These beneficiaries may have died, returned to an acute care hospital, or received post-acute care in other settings, like hospital outpatient departments and comprehensive outpatient rehabilitation facilities.

SOURCE: ProPAC analysis of MedPAR and home health claims data from the Health Care Financing Administration.

Health status may dictate the setting, particularly when patients have complications or comorbidities. Functional status and cognitive ability also affect where a patient receives post-acute care.

Among the organizational factors influencing setting choice is the post-acute care provider's relationship with a hospital. Here, ownership is key. Hospitals often own skilled nursing and rehabilitation facilities, which allows them to coordinate post-acute care. Indeed, ProPAC's analysis indicates that patients hospitalized in these facilities are likelier to use post-acute services. Hospitals that do not have their own post-acute care capacity often work closely with a free-standing provider to coordinate the transfer of patients.

Beneficiary financial considerations may also play a role in the selection of a post-acute care setting. In the case of SNF services, Medicare beneficiaries face significant coinsurance payments beginning on the twenty-first day of care, which may influence the length of their SNF stay. Beneficiaries transferred from a PPS hospital to a rehabilitation facility or long-term care hospital do not make coinsurance payments until the sixty-first day of inpatient care, while home health users have no copayment requirements. Whether and how this range of out-of-pocket costs affect provider choice are unknown.

Implications for Medicare Payment and Coverage Policies

Although some patients can receive appropriate post-acute care services from only one type of provider, many can be treated in several settings, as noted above. In view of the overlap in the services offered by these providers, any change in Medicare payment or coverage policies for one could have a substantial impact on the others. The ability to substitute care among post-acute settings may weaken the effects of any efforts to control payments to or use of a particular type of provider.

Given the relationship between acute hospital admissions and post-acute care provider use, Medicare could consider linking these payments. Such a change would create incentives to deliver care in the most efficient setting. Because of the significant and rapidly expanding share of expenditures accounted for by these providers, their payments are likely to be the focus of future attempts to control Medicare spending.

As the lines between traditional provider types continue to blur, the Medicare program needs a better understanding of the patients, treatments, and costs associated with the various post-acute care providers. This area of payment policy is complicated by the lack of a consistent patient classification scheme, which would allow meaningful comparisons of the diagnoses, severity, and functional limitations of beneficiaries in all of these settings. Further, because treatments and therapies are not documented consistently across these sites, it is not possible to accurately measure the costs of services for similar types of patients. This understanding is needed to improve Medicare's payment policies and to constrain spending growth for these providers.

Notes to Chapter 4

1. Medicare's swing-bed program, enacted under the Omnibus Budget Reconciliation Act of 1980, was designed to address the shortage of nursing home beds in rural areas and the low occupancy rates in many rural hospitals. Swing-bed hospitals may use their beds for either acute care or skilled nursing facility care. To be certified as a swing-bed provider, a hospital must be located in a rural area. In addition, it must comply with any existing Certificate of Need requirements in its state and with Medicare nursing facility conditions of participation.

2. The regions comprise the following states: New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont); Middle Atlantic (New Jersey, New York, and Pennsylvania); South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia); East North Central (Illinois, Indiana, Michigan, Ohio, and Wisconsin); East South Central (Alabama, Kentucky, Mississippi, and Tennessee); West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota); West South Central (Arkansas, Louisiana, Oklahoma, and Texas); Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming); and Pacific (Alaska, California, Hawaii, Oregon, and Washington).

3. Because only fiscal year 1994 claims were used in this analysis, inpatient post-acute admissions that began in fiscal year 1994 but ended in fiscal year 1995 were not included. Therefore, the measures of post-acute service use are slightly underestimated.

4. ProPAC defines a home health episode as a series of visits preceded and followed by a 60-day period without home health use.

5. Beneficiaries who died during their acute inpatient hospitalization were excluded from this analysis. Three high proportion DRGs were eliminated from Table 4-6 because they had fewer than 1,000 discharges.

6. Due to data inconsistencies, ProPAC could not determine whether these services were provided by the hospital's own post-acute care provider or by a different provider owned by another hospital.

7. To calculate *expected* use, ProPAC developed national DRG-specific post-acute care use rates. Each hospital's expected use was calculated by applying these rates to its mix of cases. Expected use thus reflects the proportion of patients who would have received post-acute care services if the hospital discharged patients to post-acute care providers at the national average rate.

8. The 10 conditions are stroke, spinal cord injury, congenital deformity, amputation, major multiple trauma, hip fracture, brain injury, polyarthritis (including rheumatoid arthritis), neurological disorders (including multiple sclerosis, muscular dystrophy, Parkinson's disease), and burns. 42 C.F.R. §412.23(b)(2).

9. Episodes that began between October 1, 1993, and September 30, 1994, and that were preceded by 60 days without a home health visit were considered fiscal year 1994 episodes. To avoid underestimating the average number of visits for episodes beginning in the latter portion of this period, additional home health data for services delivered between October 1, 1994, and December 30, 1994, were included.

Appendixes

Appendix A. Medicare Spending and Utilization

The Medicare program provides health insurance coverage for the elderly and certain disabled populations. Medicare Hospital Insurance, or Part A, finances inpatient hospital care and skilled nursing facility, home health agency, and hospice care. Supplementary Medical Insurance, or Part B, pays for physician services, outpatient care provided in various ambulatory care settings, and durable medical equipment.

Eligibility for Medicare Part A is based on age or disability status. People who are 65 and older and are eligible to receive cash benefits under Social Security (including Railroad Retirement beneficiaries) are automatically eligible for Part A benefits and pay no premiums. (The small number of elderly who are not automatically eligible can purchase Part A coverage.) In addition, anyone with a permanent total disability who has qualified for Social Security disability benefits for at least 24 months, as well as most people requiring chronic kidney dialysis or a kidney transplant to maintain life, can receive Part A coverage at no charge.

Medicare Part B is open to everyone eligible for Part A. Currently, enrollees pay a Part B premium of $42.50 per month. Although Part B is a voluntary program, nearly all eligibles elect to participate. Those with end-stage renal disease have a particular incentive to purchase Part B coverage because it covers outpatient dialysis.

In 1995, 37.3 million people were enrolled in Medicare (see Table A-1). Almost 89 percent were eligible because of age; they represent about 96.5 percent of the total elderly population.[1] Total Medicare program payments in 1995 were estimated at $183.8 billion (see Table A-2). Part A payments increased by 11.7 percent from the previous year, fueled by rapid growth in post-acute care services. Part B payments grew 11.1 percent between 1994 and 1995.

Beneficiaries contributed an additional $31.4 billion in copayments and deductibles in 1995, bringing the total payments to providers for Medicare-covered services to more than $215 billion (see Table A-3). Including the estimated $19 billion in Part B premiums paid by enrollees in 1995, out-of-pocket costs to the beneficiary averaged $1,370 per person.[2] About 87 percent of the elderly have private supplemental insurance or Medicaid coverage to help defray these expenses.

Table A-1. Total Medicare Enrollment, Fiscal Years 1983-1995 (In Millions)

Fiscal Year	Number of People		
	Total	Aged	Under 65[a]
1983	29.9	26.9	3.0
1984	30.4	27.4	2.9
1985	31.0	28.0	2.9
1986	31.6	28.6	3.0
1987	32.2	29.2	3.0
1988	32.9	29.7	3.1
1989	33.5	30.3	3.2
1990	34.1	30.8	3.3
1991	34.8	31.4	3.5
1992	35.5	31.9	3.6
1993	36.2	32.4	3.9
1994	36.9	32.8	4.1
1995[b]	37.3	33.0	4.3

Note: Rows may not sum to the total due to rounding.

[a] Includes the disabled and end-stage renal disease populations.

[b] Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

The types of benefits used by enrollees are changing, altering the distribution of program payments over time. Although still the costliest program component, the inpatient hospital share of program payments continues to decline. The annual rate of growth fell from 12.0 percent between 1983 and 1984 to 8.9 percent between 1994 and 1995 (see Table A-4). Payments for other Part A services, on the other hand, account for a growing share of total expenditures. Medicare payments to skilled nursing facilities grew from $500 million in 1983 to $10.3 billion in 1995, increasing an average of 28 percent per year. Home health payments also have accelerated, climbing an average of 21 percent annually between 1983 and 1995, from $1.7 billion to $16.2 billion. (See Chapter 4.)

The share of Medicare payments devoted to ambulatory services also has increased, although much less dramatically than for post-acute

Table A-2. Estimated Medicare Program Payments, 1983-1995

Year	Total Program		Part A		Part B	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$ 58.0	—	$ 39.9	—	$18.2	—
1984	65.0	12.1%	44.7	12.2%	20.3	12.0%
1985	70.1	7.8	47.4	6.0	22.8	11.8
1986	75.7	8.0	49.1	3.6	26.6	17.1
1987	80.5	6.3	49.7	1.2	30.8	15.5
1988	88.4	9.8	53.9	8.4	34.5	12.0
1989	99.8	13.0	61.6	14.3	38.2	10.9
1990	109.0	9.2	66.5	7.9	42.6	11.3
1991	121.0	11.0	74.6	12.3	46.4	9.0
1992	134.1	10.8	84.6	13.4	49.5	6.8
1993	148.4	10.7	94.9	12.2	53.5	8.1
1994	164.9	11.1	106.0	11.8	58.8	9.9
1995	183.8	11.5	118.5	11.7	65.4	11.1

Note: Payments are incurred expenditures rather than outlays and do not include beneficiary copayments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table A-3. Estimated Beneficiary Liabilities, 1985-1995

Year	Total Medicare			Inpatient Hospital		Other Medicare	
	Beneficiary Liability (In Billions)[a]	Program Payments (In Billions)	Beneficiary Share of Total Payments[b]	Beneficiary Liability (In Billions)	Beneficiary Share	Beneficiary Liability (In Billions)[c]	Beneficiary Share
1985	$13.5	$ 70.1	16.2%	$3.4	7.0%	$10.2	28.6%
1986	15.4	75.7	16.9	4.1	8.2	11.3	27.9
1987	16.8	80.5	17.2	4.5	8.8	12.2	26.8
1988	17.9	88.4	16.9	4.8	8.6	13.1	25.9
1989	17.4	99.8	14.8	3.6	6.0	13.8	23.7
1990	21.4	109.0	16.4	5.3	8.1	16.1	24.7
1991	22.6	121.0	15.7	5.9	8.3	16.6	23.1
1992	23.1	134.1	14.7	6.2	8.0	16.9	21.2
1993	30.1	148.4	16.9	6.4	7.7	23.7	24.9
1994	25.9	164.9	13.6	6.8	7.6	19.1	18.9
1995	31.4	183.8	14.6	7.2	7.4	24.2	20.6

[a] Beneficiary liabilities include Part A and Part B coinsurance and deductibles plus the additional amount physicians may charge for unassigned claims. They exclude Part B premium payments.

[b] Total payments include program payments and beneficiary liabilities.

[c] Estimates of beneficiary liability for non-patient services are understated because they assume that outpatient coinsurance is equal to 20 percent of payments.

SOURCE: Health Care Financing Administration, Office of the Actuary.

services. Total payments for Part B services grew from 31 percent of program spending in 1983 to 36 percent in 1995. Part B payments for outpatient services reached $15.6 billion in 1995, an average annual increase of 14.0 percent since 1983 (see Table A-5).

Table A-4. Estimated Medicare Part A Program Payments, by Type of Service, 1983-1995

Year	Inpatient Hospital		Skilled Nursing Facility		Home Health Agency[a]		Hospice	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$37.8	—	$0.5	—	$ 1.7	—	$0.0	—
1984	42.3	12.0%	0.6	6.9%	1.9	10.6%	[b]	—
1985	44.9	6.1	0.6	2.9	1.9	4.0	[b]	—
1986	46.5	3.8	0.6	0.2	1.9	-0.5	0.1	79.1%
1987	47.1	1.2	0.6	8.8	1.9	-1.2	0.1	45.5
1988	50.8	7.9	0.9	47.1	2.1	8.6	0.2	39.3
1989	55.4	9.1	3.5	275.7	2.6	23.8	0.2	52.6
1990	59.8	7.9	2.5	-29.2	3.9	53.0	0.4	50.4
1991	65.5	9.6	2.9	18.2	5.7	44.4	0.6	56.7
1992	71.3	8.8	4.5	55.8	8.0	40.3	0.8	50.8
1993	77.1	8.1	6.4	42.1	10.4	30.0	1.1	25.2
1994	82.8	7.4	8.3	28.9	13.6	30.9	1.5	40.3
1995	90.2	8.9	10.3	23.8	16.2	19.3	2.0	34.7

Note: Payments are incurred expenditures rather than outlays and do not include beneficiary copayments.

[a] Includes the relatively small amount of Part B home health agency expenditures.

[b] Payments were $8 million in 1984 and $43 million in 1985.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Table A-5. Estimated Medicare Part B Program Payments, by Type of Service, 1983-1995

Year	Physician		Outpatient[a]		Other[b]	
	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change	Payments (In Billions)	Percent Change
1983	$14.2	—	$3.2	—	$0.7	—
1984	15.7	10.3%	3.7	15.6%	0.9	30.4%
1985	17.1	8.8	4.4	16.7	1.3	45.0
1986	19.6	14.6	5.2	20.2	1.8	39.6
1987	22.1	13.1	6.2	18.2	2.5	33.8
1988	24.3	9.9	7.0	13.4	3.1	26.7
1989	26.8	10.3	7.6	8.8	3.8	20.8
1990	29.5	10.0	8.5	11.9	4.5	19.9
1991	31.4	6.3	9.8	14.4	5.2	16.6
1992	32.4	3.3	11.1	13.5	6.0	14.8
1993	34.3	5.9	12.4	11.7	6.8	13.3
1994	37.3	8.6	13.8	11.5	7.7	13.1
1995	40.6	9.0	15.6	12.8	9.1	18.1

Note: Payments are incurred expenditures rather than outlays and do not include beneficiary copayments.

[a] Includes payments for outpatient services provided by hospitals, free-standing end-stage renal disease facilities, skilled nursing facilities, comprehensive outpatient rehabilitation facilities, rural health clinics, and other providers of Medicare-covered outpatient services.

[b] Part B payments to home health agencies, group prepayment plans, and independent laboratories.

SOURCE: Health Care Financing Administration, Office of the Actuary.

Notes to Appendix A

1. Employee Benefit Research Institute, *Sources of Health Insurance and Characteristics of the Uninsured: Analysis of the March 1995 Current Population Survey,* Issue Brief Number 170 (Washington, DC: EBRI, 1996).

2. *1995 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund,* Washington, DC, April 1995. Medicare program payments include the $19.7 billion financed by beneficiary Part B premiums. However, since the premiums are paid to the program by beneficiaries, they also are included in calculating the average cost to the individual. Copayments and deductibles, excluding the premium payments, are $842 per person.

Appendix B. Biographical Sketches of Commissioners

Stuart H. Altman, Outgoing Chairman*

Stuart H. Altman is the Sol C. Chaikin Professor of National Health Policy at the Florence Heller Graduate School of Social Policy at Brandeis University. An economist whose research interests are primarily in the area of Federal health policy, he has been at Brandeis since 1977. Between 1971 and 1976, Dr. Altman was deputy assistant secretary for planning and evaluation/health at the Department of Health, Education, and Welfare (now the Department of Health and Human Services). From 1973 to 1974, he served as the deputy director for health of the President's Cost of Living Council, where he was responsible for developing the council's program on health care cost containment. Dr. Altman is a member of the Institute of Medicine of the National Academy of Sciences and a former member of its governing council, and serves on the board of Beth Israel Hospital (Boston). He is a past president of the Association for Health Services Research and a former board member of the Robert Wood Johnson Clinical Scholars Program. Dr. Altman has testified before the Congress on a wide range of health policy issues. He received a B.B.A. from the City College of New York, and both an M.A. and a Ph.D. in economics from the University of California, Los Angeles.

Joseph P. Newhouse, Incoming Chairman

Joseph P. Newhouse is the John D. MacArthur Professor of Health Policy and Management at Harvard University and director of Harvard's Division of Health Policy Research and Education. He has been at Harvard since 1988. Before that, Dr. Newhouse was deputy program manager for health sciences research and head of the Economics Department at the RAND Corporation. He has conducted research in health care financing, economics, and policy and was principal investigator for the RAND Health Insurance Study. Dr. Newhouse has served on many technical panels and commissions for both government and private health-related organizations, including the National Academy of Social Insurance, the Agency for Health Care Policy and Research, the Health Care Financing Administration, the Workers' Compensation Research Institute, and the Association of American Medical Colleges. He is a member of the governing council of the Institute of Medicine of the National Academy of Sciences, a former member of the Physician Payment Review Commission, and a past president of the Association for Health Services Research. Dr. Newhouse has been elected to the American Academy of Arts and Sciences. He is editor of the *Journal of Health Economics* and associate editor of the *Journal of Economic Perspectives*. Dr. Newhouse received a B.A. from Harvard College and a Ph.D. in Economics from Harvard University.

Susan S. Bailis

Susan S. Bailis is president and chief operating officer of The A•D•S Group, which specializes in long-term care and senior living. From 1983 to 1985, Ms. Bailis was associate director of New England Medical Center, where she managed the hospital's entry into the long-term care field. Ms. Bailis has held a number of academic appointments, most recently as assistant professor of psychiatry at Tufts University School of Medicine. She serves on the boards of several hospitals and has held leadership positions in many professional and community organizations. These include the executive committee of the American Health Care Association, president of the Massachusetts Extended Care Federation, and board memberships at Simmons College, the Harvard School of Public Health's Center for Cancer Prevention, the Jewish Community Relations Council, the Massachusetts Long Term Care Foundation, and the Florence Heller Graduate School of Social Policy at Brandeis University. Ms. Bailis received a B.A. from Brandeis University and an M.S.W. from Simmons College School of Social Work.

James D. Bernstein*

James D. Bernstein is director of the North Carolina Office of Rural Health and Resources Development, which has established 65 community-based health centers and recruited more than 1,100 providers to the state since 1973. Previously, Mr.

* Term expired 1996

Bernstein administered a 40-bed hospital and eight health centers for the Indian Health Service. He has held a variety of professional positions, including that of national program director for the Robert Wood Johnson Foundation initiative, Practice Sites: State Primary Care Development Strategies. Mr. Bernstein also formerly chaired the Rural Health Care Advisory Panel of the Office of Technology Assessment. He received a B.A. from the Johns Hopkins University and an M.H.A. from the University of Michigan.

Clay D. Edmands

Clay D. Edmands is president of Salina Regional Health Center in Salina, Kansas, an acute care rural referral center. His prior experience includes several years with the Fairview Hospital System in Minneapolis, Minnesota, where he held various positions, among them administrator for development and operations of regional health management and supportive services. Mr. Edmands was on the board of the Kansas Hospital Association from 1980 to 1992, serving as chairman, treasurer, and member of the executive committee. In addition to two terms on a regional policy advisory board of the American Hospital Association, Mr. Edmands was board president of the Health Systems Agency of Western Kansas. Other community involvements include the Salina health education board and Voluntary Hospitals of America. Mr. Edmands is currently a preceptor for the University of Kansas program in health care administration and chair of the university's health care services advisory board. He holds a B.S. in business administration from the University of Kansas and an M.H.A. from the University of Minnesota.

Spencer Foreman

Spencer Foreman is president of Montefiore Medical Center in the Bronx, New York, which is the university hospital for the Albert Einstein College of Medicine. An internist and pulmonary disease specialist, Dr. Foreman also holds professorial appointments at the Albert Einstein College of Medicine. Before assuming leadership of Montefiore in 1986, he was president of Sinai Hospital in Baltimore. Previously, Dr. Foreman served as a commissioned officer in the U.S. Public Health Service. A former chair of the Association of American Medical Colleges and the Council of Teaching Hospitals, he was also a member of the Accreditation Council on Graduate Medical Education and the Liaison Committee on Medical Education. Dr. Foreman has served on the boards of the League of Voluntary Hospitals, the Greater New York Hospital Association, the American Hospital Association, and the Hospital Association of New York State. He is a fellow of the American College of Physicians and a member of the Institute of Medicine of the National Academy of Science. Dr. Foreman received a B.S. from Ursinus College and an M.D. from the University of Pennsylvania.

Spencer Johnson

Spencer Johnson has been president of the Michigan Health and Hospital Association since 1985. Before that, he was executive vice president of the Hospital Association of New York State. Mr. Johnson's prior experience includes staff positions at the U.S. Senate Committee on Human Resources and the U.S. House of Representatives. He was associate director of the Domestic Council for Health, Social Security, and Income Assistance from 1976 to 1977, where he was responsible for policy planning and development for President Gerald Ford. Mr. Johnson was also a member of the American Hospital Association's State Issues Forum and Council on Allied and Government Relations. He has served on various boards, including those of the Albany Medical College, Washington Hospital Center, the Alpha Center, and the Genesee Regional Health Planning Council. Currently, he is a board member of Blue Cross Blue Shield of Michigan and secretary of the MHA Insurance Company. Mr. Johnson received a B.A. in journalism from St. Bonaventure University and an M.P.A. in health policy and planning from Cornell University.

Clark E. Kerr

Clark E. Kerr is president of ConsumerFirst, a nonprofit public benefit corporation, and is chief executive officer of ConsumerFirst Television. He also chairs the California Health Policy and Data Advisory Commission and the state of California Health Information Committee, as well as the consumer experience studies committee of the Health Benefits Advisory Council for the California Public Employees Retirement System. In addition, Mr. Kerr is executive producer and cohost of Health

Upbeat, a television series providing information on health care quality, access, and costs to the public. Before joining ConsumerFirst, he held various positions at Bank of America, including vice president of government relations, manager of corporate health programs, and manager of benefits planning. Mr. Kerr was formerly president of the California Business Group on Health and a member of the boards of directors of the Washington Business Group on Health, the Pacific Business Group on Health, and the National Committee for Quality Assurance. He received a B.A. from the University of California, Davis, and an M.B.A. from the University of California, Berkeley.

James R. Kimmey

James R. Kimmey is vice president for health sciences and professor of public health at the St. Louis University Health Sciences Center, as well as professor of community and family medicine at the St. Louis University School of Medicine. In addition, Dr. Kimmey serves as chair and chief executive officer of SLUCare, the clinical services division of the university. He has taught at the University of Wisconsin, Johns Hopkins University, New York University, and Columbia University. He served as a commissioned officer in the Public Health Service (1962–68), where he was first director of the kidney disease branch and regional health director in Region II. Dr. Kimmey was administrator of the Division of Health Policy and Planning of the state of Wisconsin and executive director of the American Public Health Association in New York and Washington, D.C. From 1978 to 1987, he was president of the Institute for Health Planning, a technical assistance program supporting health planning agencies in 23 states. Dr. Kimmey served as president of the American Health Planning Association (1980–81) and as a member of its board of directors. He is a former editor of *Health Planning Memorandum* and managing editor of the *American Journal of Public Health*. Dr. Kimmey received B.S., M.S., and M.D. degrees from the University of Wisconsin and an M.P.H. from the University of California, Berkeley.

Judith R. Lave

Judith R. Lave is professor of health economics and codirector of the Center for Research on Health Care at the University of Pittsburgh. Her primary academic appointment is in the Graduate School of Public Health, but she holds secondary appointments in the Department of Psychiatry, Department of Economics, and the Katz Graduate School of Business. At the U.S. Department of Health and Human Services, she was director of the Division of Economic and Quantitative Analysis in the Office of the Deputy Assistant Secretary and director of the Office of Research in the Health Care Financing Administration. Dr. Lave is also a member of the Institute of Medicine of the National Academy of Sciences and the National Academy of Social Insurance. She is a past president of the Association for Health Services Research and the Foundation for Health Services Research. In addition, Dr. Lave chaired the technical panel on health and was a member of the expert panel on income and health care for the Advisory Council on Social Security. She serves on the editorial boards of both the *Journal of Health Politics, Policy and Law* and the Health Administration Press. Dr. Lave received a B.A. from Queens University in Canada, from which she also holds an honorary LL.D., and a Ph.D. in economics from Harvard University.

Hugh W. Long

Hugh W. Long is associate professor of health systems management at the Tulane University School of Public Health and Tropical Medicine. He also holds appointments with Tulane's Freeman School of Business, School of Law, and graduate faculty. Dr. Long is the faculty director of Tulane's master's of medical management degree program for physicians. Dr. Long has taught at Yale University, Stanford University, San Jose State University, and Ohio State University. He is a member of the Medicare Geographic Classification Review Board. Dr. Long has served as a witness and ad hoc adviser on health care financing to the Committee on Ways and Means of the U.S. House of Representatives and to the Committee on Finance of the U.S. Senate. He is a member of the Louisiana bar. Dr. Long received a B.A. from Ohio State University, an M.B.A. and a Ph.D. in business administration and finance from Stanford University, and a J.D. from the Tulane University School of Law.

William A. MacBain

William A. MacBain is senior vice president of health plans operations for Geisinger Health

Systems in Danville, Pennsylvania, a position he has held since 1988. The Geisinger health plans division of Geisinger Health Systems includes a 155,000 member mixed-model health maintenance organization; a 25,000 member preferred provider organization; an indemnity health insurance company; and a third-party administrator. Previously, Mr. MacBain was chief operating officer of HMO of Western Pennsylvania. Before that, he was director of operations for HMO of Oklahoma. Chair of the Managed Care Association of Pennsylvania since 1989, Mr. MacBain also serves on the board of the American Association of Health Plans. He received a B.A. and an M.H.A. from Cornell University.

Robert J. Myers

Robert J. Myers was chief actuary of the Social Security Administration from 1947 to 1970 and deputy commissioner of Social Security from 1981 to 1982. Currently, he is a member of the Committee of Actuaries of the United Nations Joint Staff Pension Fund, as well as president of the International Fisheries Commissions Pension Society. A trustee for several organizations, including the investment program (mutual funds) of the American Association of Retired Persons, Dr. Myers also serves on the board of advisers of Studies on Smoking. An active participant in retirement and pension plan issues, Dr. Myers chaired the Commission on Railroad Retirement Reform (1988–90) and the Railroad Unemployment Compensation Committee (1983–85). He served on the Commission on the Social Security "Notch" Issue (1993–94) and was executive director of the National Commission on Social Security Reform (1982–83). In addition, Dr. Myers has served as an actuarial consultant to various congressional committees and as president of both the American Academy of Actuaries and the Society of Actuaries. He is professor emeritus at Temple University. He received a B.S. degree from Lehigh University, an M.S. degree from the University of Iowa, and honorary degrees from Lehigh University and Muhlenberg College.

Donald R. Oder*

Donald R. Oder is executive vice president and chief operating officer of Rush-Presbyterian-St. Luke's Medical Center in Chicago, where he formerly was senior vice president. Before that, he was audit manager with Arthur Andersen & Co. in Chicago. Mr. Oder has held various academic appointments and currently is a professor in the Department of Health Systems Management at the Rush University College of Health Sciences. He is a member of and has held leadership positions in several professional associations, including the American College of Healthcare Executives, the American Hospital Association, the Illinois Hospital Association, Voluntary Hospitals of America, the American Institute of Certified Public Accountants, and the Illinois C.P.A. Society. Mr. Oder received a B.S. from Wichita State University, a C.P.A. certificate from the University of Illinois, and an M.B.A. from the University of Chicago.

Glenda Rosenbloom

Glenda Rosenbloom is president of Rosenbloom and Associates. From 1983 to 1995, she was vice president of prospective payment for American Medical International. Before that, she was health care consulting manager at Ernst & Whinney, where she was responsible for training hospital personnel charged with implementing Medicare's prospective payment system. From 1972 to 1982, Ms. Rosenbloom was senior director for Medicare provider payment at the Blue Cross Blue Shield Association. Previously, she was audit supervisor at Peat, Marwick, Mitchell. Ms. Rosenbloom cochaired the Medicare Technical Advisory Group. She also served on the board of the Federation of American Health Systems, chaired its legislative committee, and was vice-chair of its health care financing committee. Ms. Rosenbloom received a B.S. from the University of Illinois and is a certified public accountant.

J. Michael Sadaj*

J. Michael Sadaj is a physician in private practice and a member of Rocky Mountain Clinic in Butte, Montana, where he specializes in internal medicine and pulmonary diseases. He is vice president and treasurer of the Montana Physicians Organization's medical service organization. He has served as secretary-treasurer, vice president, and president of St. James Community Hospital medical staff as well as chief of the Department of Medicine, and currently chairs the hospital's credentialing committee. From 1979 to 1990, Dr. Sadaj was

medical director of respiratory therapy and the pulmonary laboratory at St. James. A past president of the Montana Medical Association (1988–89), Dr. Sadaj was a member of the executive committee from 1985 to 1995. In addition, he has served as a delegate to the American Medical Association Resident Physician Section, Young Physician Section, and the House of Delegates. Dr. Sadaj is a founding member of the board of directors of the Montana Professional Assistance Program and was a member of the Rural Physician Retention Trust Fund Advisory Board. In 1984, he was elected to the Butte-Silver Bow Government Study Commission. Dr. Sadaj received B.S. and M.D. degrees from the University of Nebraska.

Gerald M. Shea

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James R. Tallon Jr.

James R. Tallon Jr. is president of the United Hospital Fund of New York. He also chairs the Kaiser Commission on the Future of Medicaid and is a visiting lecturer at the Harvard University School of Public Health. In addition, he is a member of the board of commissioners of the Joint Commission on the Accreditation of Healthcare Organizations and serves on the boards of the Association for Health Services Research and the Alliance for Health Reform. Mr. Tallon is a trustee of the Alpha Center and of the New York Academy of Medicine. Prior to joining the United Hospital Fund, he was the majority leader of the New York State Assembly, where he served for 19 years beginning in 1975. Before being elected, Mr. Tallon was the executive director of the NY-PENN Health Planning Council, one of New York's eight regional health planning agencies. He received a B.A. from Syracuse University and received an M.A. from Boston University.

Jae L. Wittlich

Jae L. Wittlich is president and chief operating officer, group operations, CNA Insurance Companies. He also served as vice president of the group benefits department from 1985 to 1990 and as vice president of the group operations division from 1977 to 1985. Before joining CNA Insurance, Mr. Wittlich was with Allstate for 12 years, most recently as assistant vice president of group life and health operations. He is currently vice chairman of the board of directors of the Health Insurance Association of America. Besides being a member of the executive committee and board of directors of the Association of Private Pension and Welfare Plans, he serves on the boards of directors of AmeriChoice Corporation; the Foundation for

Health Enhancement; Managed Healthcare Systems of New York; and Private Healthcare Systems, Inc. Mr. Wittlich is a fellow of the Society of Actuaries and a member of the American Academy of Actuaries. He holds B.A. and M.A. degrees from the University of Michigan.

Appendix C. Glossary

The following acronyms and terms are frequently referenced in Prospective Payment Assessment Commission (ProPAC) reports. Many definitions are from various Health Care Financing Administration publications and from other sources, including the American Hospital Association, the Physician Payment Review Commission, and the *Federal Register*. Where necessary, ProPAC has developed or modified definitions consistent with its use of the terms in Commission documents.

ACRONYMS

AAHP	American Association of Health Plans
AAPCC	Adjusted Average Per Capita Cost
ACR	Adjusted Community Rate
AFDC	Aid to Families with Dependent Children
AHA	American Hospital Association
AHCPR	Agency for Health Care Policy and Research
ASC	Ambulatory Surgical Center
CBO	Congressional Budget Office
CC	Complication and/or Comorbidity
CMI	Case-Mix Index
CON	Certificate of Need
CPI	Consumer Price Index
DRG	Diagnosis-Related Group
DSH	Disproportionate Share
EBRI	Employee Benefit Research Institute
ECI	Employment Cost Index
ERISA	Employee Retirement Income Security Act of 1974
ESRD	End-Stage Renal Disease
FDA	Food and Drug Administration
FR	Federal Register
FTE	Full-Time Equivalent
GAO	General Accounting Office
GHAA	Group Health Association of America (now AAHP)
GDP	Gross Domestic Product
GME	Graduate Medical Education
HCFA	Health Care Financing Administration
HCPP	Health Care Prepayment Plan
HEDIS	Health Plan Employer Data and Information Set
HHA	Home Health Agency
HHS	Health and Human Services, Department of
HIAA	Health Insurance Association of America
HIV	Human Immunodeficiency Virus
HMO	Health Maintenance Organization
IME	Indirect Medical Education
IPA	Independent Practice Association
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LOS	Length of Stay
MCCA	Medicare Catastrophic Coverage Act of 1988
MedPAR	Medicare Provider Analysis and Review file
MGCRB	Medicare Geographic Classification Review Board
MSA	Metropolitan Statistical Area
NCHS	National Center for Health Statistics
NCI	National Cancer Institute
NCQA	National Committee for Quality Assurance
OMB	Office of Management and Budget, Executive Office of the President
OBRA	Omnibus Budget Reconciliation Act
PCCM	Primary Care Case Management
PHP	Prepaid Health Plan
POS	Point of Service
PPO	Preferred Provider Organization
PPRC	Physician Payment Review Commission
PPS	Prospective Payment System
PRO	Peer Review Organization
ProPAC	Prospective Payment Assessment Commission
RBRVS	Resource-Based Relative Value Scale
SCH	Sole Community Hospital
SMI	Supplementary Medical Insurance
SNF	Skilled Nursing Facility
SSI	Supplemental Security Income
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
UR	Utilization Review

TERMS

Adjusted Admissions—A measure of all patient care activity in a hospital, including both inpatient and outpatient care. Adjusted admissions are the sum of inpatient admissions and an estimate of the volume of outpatient services, expressed as the number of inpatient admissions that could have been produced with the same amount of resources. This estimate is calculated by multiplying outpatient visits by the ratio of outpatient charges per visit to inpatient charges per admission. (AHA and ProPAC)

Adjusted Average Per Capita Cost (AAPCC)—Actuarial projections of per capita Medicare spending in an area for enrollees in fee-for-service Medicare. Separate AAPCCs are calculated—usually at the county level—for Part A and Part B services for the aged, disabled, and people with ESRD. Medicare pays risk plans by applying adjustment factors to 95 percent of the Part A and Part B AAPCCs. The adjustment factors reflect

differences in Medicare per capita fee-for-service spending related to age and sex, as well as institutional, Medicaid, and employment status. (See also Risk Contract.) (ProPAC)

Aggregate Margin—A margin that compares revenues to expenses for a group of hospitals, rather than a single hospital. It is computed by subtracting the sum of expenses for all hospitals in the group from the sum of revenues and dividing by the sum of revenues. (See also PPS Inpatient Margin, PPS Operating Margin, and Total Margin.) (ProPAC)

Ambulatory Surgical Center (ASC)—A freestanding facility certified by Medicare that performs certain types of procedures on an outpatient basis. (ProPAC)

Balance Billing—Physician charges in excess of Medicare-allowed amounts, for which Medicare patients are responsible, subject to a limit. (ProPAC)

Basic DRG Payment Rate—The payment rate a hospital will receive for a Medicare patient in a particular diagnosis-related group. The payment rate is calculated by adjusting the standardized amount to reflect wage rates in the hospital's geographic area (and cost of living differences unrelated to wages) and the costliness of the DRG. (See also Standardized Amount.) (ProPAC)

Beneficiary—A person enrolled in the Medicare program. (See also Enrollee.) (ProPAC)

Beneficiary Liability—The amount beneficiaries must pay providers for Medicare-covered services. Liabilities include copayments, deductibles, and balance billing amounts. Beneficiaries also are responsible for paying the Medicare program for their share of the Part B premium, but this generally is not included in estimates of beneficiary liability. (ProPAC)

Bundling—The use of a single payment for a group of related services. (PPRC)

Capital Costs—Depreciation, interest, leases and rentals, and taxes and insurance on tangible assets like physical plant and equipment. (HCFA)

Capitation—A method of paying health care providers or insurers in which a fixed amount is paid per enrollee to cover a defined set of services over a specified period, regardless of actual services provided. (See also Bundling, Fee for Service, Per Diem, and Rate Setting.) (ProPAC)

Carrier—An organization, typically an insurance company, that has a contract with the Health Care Financing Administration to administer claims processing and make Medicare payments to health care providers for most Medicare Part B benefits. (See also Fiscal Intermediary and Part B.) (HCFA)

Case Mix—The mix of patients treated within a particular institutional setting, such as the hospital. Patient classification systems like DRGs can be used to measure hospital case mix. (See also DRGs and Case-Mix Index) (ProPAC)

Case-Mix Index (CMI)—The average DRG weight for all cases paid under PPS. The CMI is a measure of the relative costliness of the patients treated in each hospital or group of hospitals. (See also DRG.) (ProPAC)

Charges—The posted prices of provider services. Medicare requires hospitals to apply the same schedule of charges to all patients, regardless of the expected sources or amount of payment. (ProPAC)

Community Rating—A method of determining an insurance premium structure that reflects expected utilization by the population as a whole, rather than by specific groups. (United HealthCare Corporation)

Cost Contract—An arrangement between a health plan and HCFA under Section 1876 or Section 1833 of the Social Security Act, under which the health plan provides health services and is reimbursed its costs. The beneficiary can use providers outside the plan's provider network. (See also Health Care Prepayment Plan and Risk Contract.) (ProPAC)

Cost Shifting—Increasing revenues from some payers to offset uncompensated care losses and lower net payments from other payers. (ProPAC)

Diagnosis-Related Groups (DRGs)—A system for determining case mix, used for payment under Medicare's PPS and by some other payers. The DRG system classifies patients into groups based

on the principal diagnosis, type of surgical procedure, presence or absence of significant comorbidities or complications, and other relevant criteria. DRGs are intended to categorize patients into groups that are clinically meaningful and homogeneous with respect to resource use. Medicare's PPS currently uses 490 mutually exclusive DRGs, each of which is assigned a relative weight that compares its costliness to the average for all DRGs. (See also Case Mix.) (ProPAC)

Disproportionate Share (DSH) Adjustment—A payment adjustment under Medicare's PPS or under Medicaid for hospitals that serve a relatively large volume of low-income patients. (CBO)

Enrollee—A person who is covered by health insurance. (See also Beneficiary.) (ProPAC)

Excluded Hospitals and Distinct-Part Units—Hospitals and hospital units that are specifically excluded from Medicare's PPS. These include children's, cancer, long-term care, rehabilitation, and psychiatric hospitals. Rehabilitation or psychiatric units of acute care hospitals are exempt if they meet certain criteria specified by the Secretary of HHS. Hospitals located in U.S. territories, Federal hospitals, and Christian Science Sanatoria are also excluded from PPS. Excluded facilities remain under cost-based reimbursement, subject to rate of increase limits, established in accordance with TEFRA. (See also Tax Equity and Fiscal Responsibility Act of 1982.) (48 FR 39755)

Fee for Service—A method of reimbursing health care providers in which payment is made for each unit of service rendered. (See also Bundling, Capitation, Per Diem, and Rate Setting.) (ProPAC)

Fiscal Intermediary—An entity, usually an insurance company, that has a contract with HCFA to determine and make Medicare payments for Part A and certain Part B benefits to hospitals and other providers of services and to perform related functions. (See also Part A and Part B.) (HCFA)

Fiscal Year—A 12-month period for which an organization plans the use of its funds, such as the Federal government's fiscal year (October 1 to September 30). Fiscal years are referred to by the calendar year in which they end; for example, the Federal fiscal year 1995 began October 1, 1994, and ended September 30, 1995. Individual providers can designate their own fiscal years, and this is reflected in differences in the time periods covered by the Medicare Cost Reports. (See also PPS Year.) (ProPAC)

Graduate Medical Education (GME)—The period of training following the completion of medical school when physicians, as residents, receive training in a specialty like family practice, general surgery, or anesthesiology. Medicare recognizes its share of the direct costs for these training programs in hospitals (including residents' salaries and benefits, faculty supervisory costs, program administration, and facility overhead costs) through a prospectively set, hospital-specific, per resident payment. (ProPAC)

Gross Domestic Product (GDP)—The value of all goods and services produced within the boundaries of the United States during a given period. (ProPAC)

Health Care Prepayment Plan (HCPP)—A plan that receives payment for its reasonable costs of providing Medicare Part B services to Medicare enrollees. (See also Cost Contract and Risk Contract.) (HCFA)

Health Maintenance Organization (HMO)—A managed care plan that integrates financing and delivery of a comprehensive set of health care services to an enrolled population. HMOs may contract with, directly employ, or own participating health care providers. Enrollees are usually required to choose from among these providers and in return have limited copayments. Providers may be paid through capitation, salary, per diem, or prenegotiated fee-for-service rates. (See also Capitation, Fee for Service, Managed Care, Per Diem, and Preferred Provider Organization.) (ProPAC)

Health Plan Employer Data and Information Set (HEDIS)—A set of standardized measures of health plan performance. HEDIS allows comparisons between plans on quality, access and patient satisfaction, membership and utilization, financial information, and health plan management. HEDIS was developed by employers, HMOs, and the National Committee for Quality Assurance. (NCQA)

Indirect Medical Education (IME) Adjustment—A payment adjustment applied to DRG

and outlier payments under PPS for hospitals that operate an approved graduate medical education program. For operating costs, the adjustment is based on the hospital's ratio of interns and residents to the number of beds. For capital costs, it is based on the hospital's ratio of interns and residents to average daily occupancy. (HCFA)

Input—The labor, capital, and other resources hospitals use to produce goods and services. (ProPAC)

Intensity of Services—The number and complexity of resources used in producing a patient care service, such as a hospital admission or home health visit. Intensity of services reflects, for example, the amount of nursing care, diagnostic procedures, and supplies. (ProPAC)

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)—A diagnosis and procedure classification system designed to facilitate the collection of uniform and comparable health information. The disease classification is revised periodically. ICD-9-CM, the current version, was issued in 1979. This system is used to group patients into DRGs. (HCFA)

Large Urban Area—A metropolitan statistical area with a population of one million or more, or a New England County Metropolitan Area with a population of 970,000 or more. (See also Metropolitan Statistical Area and Other Urban Area.) (ProPAC)

Major Teaching Hospitals—Hospitals with an approved graduate medical education program and a ratio of interns and residents to beds of 0.25 or greater. (See also Indirect Medical Education Adjustment and Other Teaching Hospitals.) (HCFA)

Managed Care—Any system of health service payment or delivery arrangements in which the health plan or provider attempts to control or coordinate health service use to contain health expenditures, improve quality, or both. Arrangements often involve a defined delivery system of providers having some form of contractual relationship with the plan. (PPRC)

Market Basket Index—An index of the annual change in the prices of goods and services providers use for producing health services, also referred to as an input price index. There are separate market baskets for PPS hospital operating inputs and capital inputs, PPS-excluded facility operating inputs, and SNF, home health agency, and renal dialysis facility operating and capital inputs. (ProPAC)

Medicare Cost Report (MCR)—An annual report required of all institutions participating in the Medicare program. The MCR records each institution's total costs and charges associated with providing services to all patients, the portion of those costs and charges allocated to Medicare patients, and the Medicare payments received. (See also PPS year.) (ProPAC)

Medicare Provider Analysis and Review (MedPAR) File—A HCFA data file that contains charge data and clinical characteristics, such as diagnoses and procedures, for every hospital inpatient bill submitted to Medicare for payment. (ProPAC)

Medigap Policy—A privately purchased insurance policy that supplements Medicare coverage and meets specified requirements set by Federal statute and the National Association of Insurance Commissioners. (ProPAC)

Metropolitan Statistical Area (MSA)—A geographic area that includes at least one city with 50,000 or more inhabitants, or a Census Bureau-defined urban area of at least 50,000 inhabitants and a total MSA population of at least 100,000 (75,000 in New England). (OMB)

Nursing Facility—An institution that provides skilled nursing care and rehabilitation services to injured, functionally disabled, or sick persons. Formerly, distinctions were made between intermediate care facilities and SNFs. The Omnibus Budget Reconciliation Act of 1987 eliminated this distinction effective October 1, 1990, by requiring all nursing facilities to meet SNF certification requirements. (See also Skilled Nursing Facility.) (ProPAC)

Other Teaching Hospitals—Hospitals with an approved graduate medical education program and a ratio of interns and residents to beds of less than 0.25. (See also Indirect Medical Education Adjustment and Major Teaching Hospitals.) (ProPAC)

Other Urban Area—A metropolitan statistical area with a population of less than one million, or a New England County Metropolitan Area with fewer than 970,000 people. (See also Large Urban Area and Metropolitan Statistical Area.) (ProPAC)

Outliers—Cases with extremely long lengths of stay (day outliers) or extraordinarily high costs (cost outliers) compared with others classified in the same diagnosis-related group. Hospitals receive additional PPS payments for these cases. (ProPAC)

Part A—Medicare Hospital Insurance (HI) under Part A of Title XVIII of the Social Security Act, which covers beneficiaries for inpatient hospital, home health, hospice, and limited skilled nursing facility services. Beneficiaries are responsible for deductibles and copayments. Part A services are financed by the Medicare HI Trust Fund. (See also Fiscal Intermediary and Part B.) (ProPAC)

Part B—Medicare Supplementary Medical Insurance (SMI) under Part B of Title XVIII of the Social Security Act, which covers Medicare beneficiaries for physician services, medical supplies, and other outpatient treatment. Beneficiaries are responsible for monthly premiums, copayments, deductibles, and balance billing. Part B services are financed by a combination of enrollee premiums and general tax revenues. (See also Carrier and Part A.) (ProPAC)

Peer Review Organization (PRO)—An organization that contracts with HCFA to investigate the quality of health care furnished to Medicare beneficiaries and to educate beneficiaries and providers. PROs also conduct limited review of medical records and claims to evaluate the appropriateness of care provided. (ProPAC)

Per Diem Payments—Fixed daily payments that do not vary with the level of services used by the patient. This method generally is used to pay institutional providers, such as hospitals and nursing facilities. (See also Capitation.) (ProPAC)

Point-of-Service Plan (POS)—A health plan allowing the enrollee to choose to receive a service from a participating or a nonparticipating provider, with different benefit levels associated with one or the other types of providers. (See also PPO.) (United HealthCare Corporation)

PPS Inpatient Margin—A measure that compares PPS operating and capital payments with Medicare-allowable inpatient operating and capital costs. It is calculated by subtracting total Medicare-allowable inpatient operating and capital costs from total PPS operating and capital payments and dividing by total PPS operating and capital payments. (See also PPS Operating Margin.) (ProPAC)

PPS Operating Margin—A measure that compares PPS operating payments with Medicare-allowable inpatient operating costs. This measure excludes Medicare costs and payments for capital, direct medical education, organ acquisition, and other categories not included among Medicare-allowable inpatient operating costs. It is calculated by subtracting total Medicare-allowable inpatient operating costs from total PPS operating payments and dividing by total PPS operating payments. (See also PPS Inpatient Margin.) (ProPAC)

PPS Year—A designation referring to hospital cost reporting periods that begin during a given Federal fiscal year, reflecting the number of years since the initial implementation of PPS. For example, PPS 1 refers to hospital fiscal years beginning in Federal fiscal year 1984, which was the first year of PPS. For a hospital with a fiscal year beginning July 1, PPS 1 covers the period from July 1, 1984, through June 30, 1985. (See also Fiscal Year.) (ProPAC)

Preferred Provider Organization (PPO)—A health plan with a network of providers whose services are available to enrollees at lower cost than the services of non-network providers. PPO enrollees may self-refer to any network provider at any time. (See also Fee for Service, Health Maintenance Organization, Managed Care, and Point-of-Service Plan.) (ProPAC)

Prepaid Health Plan (PHP)—A Medicaid managed care program in which an entity contracts to provide certain medical services to enrollees in exchange for a capitation payment. Prepaid health plans are not required to cover the full range of Medicaid benefits. (See also Primary Care Case Management.) (HCFA)

Primary Care Case Management (PCCM)—A Medicaid managed care program in which an eligible individual may use services only with authorization from his or her assigned primary care provider. That provider is responsible for locating, coordinating, and monitoring all primary and other medical services for enrollees. (See also Prepaid Health Plan.) (HCFA)

Productivity—The ratio of outputs (goods and services produced) to inputs (resources used in production). Increased productivity implies that the hospital or health care organization is either producing more output with the same resources or the same output with fewer resources. (ProPAC)

Prospective Payment—A method of paying health care providers in which rates are established in advance. Providers are paid these rates regardless of the costs they actually incur. (ProPAC)

Prospective Payment System (PPS)—Medicare's acute care hospital payment method for inpatient care. Prospective per case payment rates are set at a level intended to cover operating costs for treating a typical inpatient in a given diagnosis-related group. Payments for each hospital are adjusted for differences in area wages, teaching activity, care to the poor, and other factors. Hospitals may also receive additional payments to cover extra costs associated with atypical patients (outliers) in each DRG. Capital costs, originally excluded from PPS, are being phased into the system. By 2001, capital payments will be made on a fully prospective, per case basis. (See also Capital Costs, Diagnosis-Related Groups, Outliers, and Prospective Payment.) (ProPAC)

Rate Setting—A method of paying health care providers in which the Federal or state government establishes payment rates for one or more payers for various categories of health services. (PPRC and ProPAC)

Relative Value Scale—An index that assigns weights to each medical service; the weights represent the relative amount to be paid for each service. The relative value scale used in the development of the Medicare Physician Fee Schedule consists of three cost components: physician work, practice expense, and malpractice expense. (PPRC)

Resource-Based Relative Value Scale (RBRVS)—A relative value scale based on the resources involved in providing a physician service. (See also Relative Value Scale.) (PPRC)

Risk Adjustment—Increases or reductions in the amount of payment made to a health plan on behalf of a group of enrollees to compensate for health care expenditures that are expected to be higher or lower than average. (See also Risk Selection.) (PPRC and ProPAC)

Risk Contract—An arrangement between a health maintenance organization and HCFA under Section 1876 of the Social Security Act. Under this contract, enrolled Medicare beneficiaries generally must use their plan's provider network. Capitation payments to plans are set at 95 percent of the AAPCC. (See also Adjusted Average Per Capita Cost, Capitation, Cost Contract, and Health Care Prepayment Plan.) (ProPAC)

Risk Selection—Enrollment choices made by health plans or enrollees on the basis of perceived risk relative to the premium to be paid. (See also Risk Adjustment.) (PPRC and ProPAC)

Skilled Nursing Facility (SNF)—An institution that has a transfer agreement with one or more hospitals, provides primarily inpatient skilled nursing care and rehabilitative services, and meets other specific certification requirements. (See also Nursing Facility.) (IOM)

Sole Community Hospital—A hospital Medicare designates as the only provider of hospital care in its market area. Under PPS, sole community hospitals benefit from payment provisions intended to ensure their financial viability and access to hospital services for Medicare beneficiaries. (ProPAC)

Standardized Amount—An amount used as the basis for payment under PPS. It is intended to represent the national average operating cost of inpatient treatment for a typical Medicare patient in a reasonably efficient hospital in a large urban or other area. Standardized amounts are based on Medicare costs reported by hospitals for cost reporting periods ending in 1982, adjusted for geographic location and certain hospital characteristics, such as teaching activity. The adjusted

amounts are updated to the year of payment by an annual update factor. (See also Update Factor.) (CRS)

Supplemental Insurance—Any private health insurance plan held by a Medicare beneficiary, including medigap policies and post-retirement health benefits. (ProPAC)

Swing-Bed Hospital—A hospital participating in the Medicare swing-bed program. This program allows rural hospitals with fewer than 100 beds to provide skilled post-acute care services in acute care beds. (HCFA)

Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA)—Legislation that established target rate of increase limits on reimbursements for inpatient operating costs per Medicare discharge. A facility's target amount is derived from costs in a base year updated to the current year by the annual allowable rate of increase. Medicare payments for operating costs generally may not exceed the facility's target amount. These provisions still apply to hospitals and units excluded from PPS. (See also Excluded Hospitals and Units.) (ProPAC)

Total Margin—A measure that compares total hospital revenues with expenses for inpatient, outpatient, and non-patient care activities. The total margin is calculated by subtracting total expenses from total revenues and dividing by total revenues. (ProPAC)

Uncompensated Care—Care rendered by hospitals or other providers without payment from the patient or a government-sponsored or private insurance program. It includes both charity care, which is provided without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment due from the patient. (ProPAC)

Update Factor—The year-to-year increase in base payment amounts for PPS and excluded hospitals and dialysis facilities. The update factors generally are legislated by the Congress after considering annual recommendations provided by ProPAC and the Secretary of HHS. ProPAC's update factors are intended to reflect changes in the prices of inputs used to provide patient care services as well as changes in productivity, technological advances, quality of care, and long-term cost-effectiveness of services. ProPAC recommends separate update factors for PPS hospital operating payments, PPS hospital capital payments, the TEFRA target amounts for PPS-excluded hospitals and distinct-part units, and composite rate payments to dialysis facilities. (See also Market Basket Index.) (ProPAC)

Utilization Review (UR)—The review of services delivered by a health care provider to evaluate the appropriateness, necessity, and quality of the prescribed services. The review can be performed on a prospective, concurrent, or retrospective basis. (ProPAC)

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